# TREK 2 AGP
# User's Guide


Manual edition January 1999
Document Number G790

The information in this document is subject to change without prior notice in order to improve reliability, design and function and does not represent a commitment on the part of the manufacturer.
In no event will the manufacturer be liable for direct, indirect, special, incidental, or consequential damages arising out of the use or inability to use the product or documentation, even if advised of the possibility of such damages.



## Trademarks

Phoenix is a trademark of Phoenix Technologies Ltd. CardSoft is a trademark of SystemSoft Corporation. AutoCAD and Autoshade are trademarks of Autodesk, Inc. IBM, OS/2, and VGA are trademarks of International Business Machines Corp. Lotus, 1-2-3, and Symphony are trademarks of Lotus Development Corp. Windows, Word, MS-DOS, and Microsoft are trademarks of Microsoft Corp. VESA is a trademark of Video Electronics Standards Association.

Other product names mentioned herein are used for identification purposes only and may be trademarks and/or registered trademarks of their respective companies.

## Limitation of Liability

While reasonable efforts have been made to ensure the accuracy of this manual, the manufacturer and distributor assume no liability resulting from errors or omissions in this manual, or from the use of the information contained herein.

MAS001571-02 2/99
(TREK2 AGP)
EHW / MJB

## From the Editors . . .

This may your first time setting up your computer, in which case, it is hoped that this manual will be an effective resource for you to make this as much of a learning process, and as less of a hassle, as possible.

There exists the possibility that you have already set up your machine, and you've taken the manual out for a detailed look at your system's features. You may want to know about possible configuration changes and modifications that can be made, or simply match wits with the glossary and see if you can come up with the correct definition for "BIOS" without peeking.

Another reality is one of frustration, hair-pulling and possible cursing. The possibility of "something isn't working right." Reconfiguring the CMOS screens may have seemed like a good idea at the time, but now you are only getting cranky beeps. Now what?! You may be trying to get help online … but a blank screen isn't going to help you out much there, and you've pulled the guide out as a last resort.

Fair enough.

If the reason you got the user's guide out is based on the last possibility … first things, first … take a deep breath.

The system user's guide is designed to help you in all of the above situations, and give you a ready reference to the capabilities of your system.

A troubleshooting section may save you a call to technical support, should you be staring at a blank screen right now.

We want to make this guide as useful as possible and welcome your comments. You can send comments to: **manuals@micronpc.com**.

Whatever reason brought you to reading the user's guide … Welcome. We hope it makes your experience with Micron even better.

Sincerely,

The editors

# Contents

# About this manual

This manual contains information to help you get the most from your TREK 2 computer. Whether you are a new or experienced computer user, you will benefit more from this manual if you are familiar with its organization. This manual contains eleven chapters, appendices, and an index.

### Chapter 1: Getting started
This section lists the special features of your TREK 2 computer and available options. And, we'll describe the parts you should have received and give you step-by-step procedures for setting up and starting the computer

### Chapter 2: Caring for your TREK 2
Learn all of the ways to care for your TREK 2, to ensure years or reliability and peak performance.

### Chapter 3: Troubleshooting
Having a problem with your TREK 2? Here's a simple guide to common troubleshooting techniques.

### Chapter 4: Using the TREK 2
This chapter outlines the features and capabilities of your TREK 2, and how to use those features for great performance.

### Chapter 5: Connecting peripheral devices
We'll show you how connect your TREK 2 to other systems for advanced audio and visual enhancement.

### Chapter 6: Optional fax/modem
This section provides an overview to the optional fax/modem feature for the TREK 2.

### Chapter 7: Optional port replicator
This section describes the optional port replicator for the TREK2.

### Chapter 8: Running BIOS setup
We'll show you how to operate the Setup Utility that's provided in the computer's ROM BIOS.

### Chapter 9: Software Utilities
Learn to install and use the software utilities and drives that come with your computer.

### Chapter 10: DVD Feature
We'll show you the capabilities and how the use the TREK 2's DVD feature.

### Chapter 11: Using the PHDisk Utility
This chapter describes the suspend to disk date file allocation utility to create the Suspend to Disk data file.

### Appendix A: Specifications
### Appendix B: Index
### Appendix C: Abbreviations

In addition to this manual, you will also want to consult the manuals for your operating system and application software.

## Manual Conventions

The following conventions are used throughout this manual:

- Bullets (for example, this one) present lists of information or items in a list of alternatives.

Numbered procedures guide you through sequential steps. Notes contain important information that is set off from the text. Caution messages appear before procedures which, if not observed, could result in loss of data or damage to equipment.

## Personal Inventory

This TREK 2 computer system is designed for years of productive and pleasurable computing. Use this section to keep notes about details of your purchase. Update this section when you add new options.

Date of Purchase:

Phone:
**1-800-393-8935**
Address:

E-mail address:
Transport.support@micronpc.com

Web site:
**www.micronpc.com**

Type of LCD screen display

- ❒ 12.1”TFT SVGA Color LCD
- ❒ 14.1" ColorTFT XGA LCD
- ❒ Others:

Serial Number:

CPU type:

Hard disk capacity:

Memory capacity:

## Regulatory information

## Compliance Information Statement

Declaration of Conformity

| | |
|---|---|
| Responsible Party Name: | Micron Electronics, Inc. |
| Address: | 900 East Karcher Road<br>Nampa ID 83687<br>USA |
| Telephone | 208/898-3434 |
| Fax | 208/898-3424 |
| Type of equipment | Personal computer |
| Model name: | TransPort TREK 2 AGP |

## TREK 2

Federal Communications Commission Radio Frequency Interference Statement

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ❒ Reorient or relocate the receiving antenna.
- ❒ Increase the separation between the equipment and receiver.
- ❒ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ❒ Consult the dealer or an experienced radio TV technician for help.

## Notice:

1. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
2. Shielded interface cables and a non-shielded AC power cord must be used in order to comply with emission limits.
3. This equipment is to be used with power supply: ILAN F1700C (08), Delta ADP-50GB, or Delta ADP-50PB Internal power supply.

### Canadian DOC Notice For Class B Computing Devices

This Class B digital apparatus meets all requirements of the Canadian Interference - Causing Equipment Regulations.

## Optional Port Replicator Compliance Information Statement

### Declaration of Conformity

According to FCC Part 15

| | |
|---|---|
| Responsible Party Name: | Micron Electronics, Inc. |
| Address: | 900 East Karcher Road<br>Nampa ID 83687<br>USA |
| Telephone | 208 / 898-3434 |
| Fax | 208 / 898-3424 |
| Type of equipment | Port replicator |

1. The changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
2. Shielded interface cables and a non-shielded AC power cord must be used in order to comply with emission limits.
3. This equipment should be used with power supply, namely:
   DELTE ADP-50GB or ADP-50MB; ILAN F1700C; AMBIT APA-50XX.

### Canadian DOC Notice For Class B Computing Devices

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulation of the Canadian Department of Communications.

## Optional fax/modem

### FCC Compliance

This equipment complies with Part 68 of the FCC Rules. On this equipment is a label that contains, among other information, the FCC registration number and Ringer Equivalence Number (REN) for this equipment. You must, upon request, provide this information to your telephone company.

If your telephone equipment causes harm to the telephone network, the Telephone Company may discontinue your service temporarily. If possible, they will notify in advance. But, if advance notice is not practical, you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect proper operation of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

The FCC prohibits this equipment to be connected to party lines or coin-telephone service.

In the event that this equipment should fail to operate properly, disconnect the equipment from the phone line to determine if it is causing the problem. If the problem is with the equipment, discontinue use and contact your dealer or vendor.

The FCC also requires the transmitter of a FAX transmission be properly identified (per FCC Rules Part 68, Sec. 68.381 ( c) (3)).

### FCC Class B Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ❒ Reorient or relocate the receiving antenna
- ❒ Increase the separation between the equipment and the receiver
- ❒ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- ❒ Consult the dealer or an experienced radio / TV technician for help

### Notice:

1) Shielded cables, if any, must be used in order to comply with the emission limits. 2) Any change or modification not expressly approved by the Grantee of the equipment authorization could void the user authority to operate the equipment

### DOC Compliance Information

NOTICE: The Canadian Department of Communications label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user satisfaction.

Before installing this equipment, users ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection.

The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier.

Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

CAUTION: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

NOTICE: The Load Number (LN) assigned to each terminal device denotes the percentage of the total load to e connected to a telephone loop which is used by the device, to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the sum of the Load Numbers of all the devices does not exceed 100.

## UL Notice

Caution: This internal modem adapter is to be installed in UL listed computers only, Always disconnect the modem adapter from the telephone system during installation or when the cover is removed from the computer.

## Ringer Equivalence Number

The ringer equivalence number of this modem is 1.
REN is a guide to the maximum number of apparatus that can be simultaneously connected to one telephone line. The REN value of each apparatus is added together, and should not exceed 4. Unless otherwise marked, a telephone can be assumed to have a REN of 1.

## Approved Usage

This modem is only approved for use of the following facilities:
Storage of telephone numbers for retrieval by a predetermined code.

- ❒ Detection of initial proceed indication
- ❒ Automatic calling / Automatic answering
- ❒ Tone detection
- ❒ Operation in the absence of secondary proceed payphone
- ❒ Loudspeaking facility

This modem is NOT suitable for use as an extension to a payphone.

This modem is not approved for connection to private speechband services. This modem does not support automatic redial function.

Any other usage will invalidate the approval of your modem, if, as a result, it then ceases to conform to the standards against which approval was granted.

# 1. Getting Started

Congratulations on your purchase of the TransPort TREK 2.

Your TREK 2 features the latest advances in portable computing technology. The TREK 2's modular design provides maximum expandability — without compromising portability. The high-performance Pentium II CPU and enhanced IDE hard drive provide you with extra processing power for handling complex graphics and running large programs.

Two PCMCIA slots give you the ability to use standard PCMCIA cards, such as a LAN adapter or memory cards. The TREK also features two expansion module bays. The first accommodates an FDD.

The second expansion module bay accommodates a 5¼" CD-ROM drive, DVD-ROM or a second HDD. The TREK's state-of-the-art ergonomic design and sophisticated architecture provides you with a portable personal computer that is compact, powerful, and easy to use.

To keep pace with the accelerated advances in technology, your TREK 2 provides extensive upgrade options, including a removable hard disk drive, PC cards (including an *MPEG 2* card, an optional port replicator, and memory expansion cards.)

This User's Guide describes all features of the TransPort TREK 2 in an easy-to-read yet thorough manner. The primary goals of this chapter are to identify the TREK 2 external components and to provide a quick reference of functions for experienced computer users.

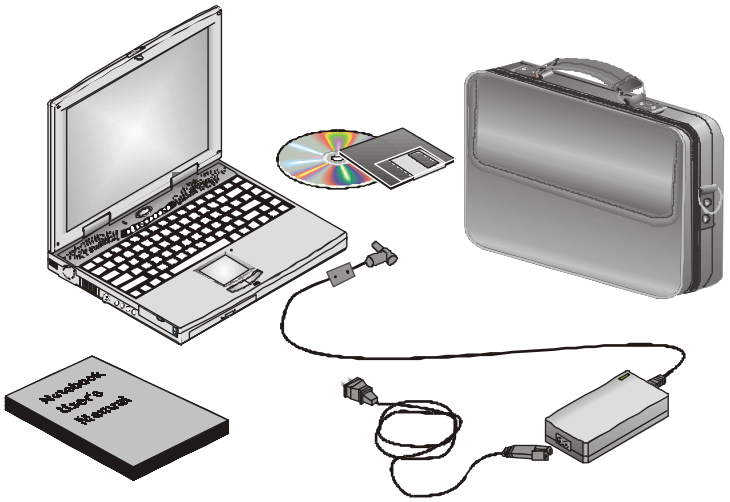



Figure 1-1: The TREK 2 and accessories

## Unpacking the TREK 2

The TREK 2 comes securely packaged in a sturdy shipping carton. Upon receiving your TREK 2, open the box and carefully remove the contents. If anything is missing or damaged, please contact Micron Electronics immediately. All systems should include the following items:

- The TREK 2 computer
- An AC adapter
- An AC power cord
- A smart lithium-ion battery pack
- Software and Micron Customer Resource Center CD
- User's manual

This book shows you how to set up your system and keep it running.

## Keep the box

It's a good idea to keep your TREK 2's box and packing materials. That way, if you ever have to store the system or return it, your components will be well protected

## Let your computer acclimate itself

Although your TREK 2 can easily stand temperature extremes, it doesn't like *rapid* changes in temperature, like going from the cold outdoors to a warm office. Rapid changes in temperature can cause water droplets to condense inside your case, threatening to damage the electronic parts inside. If it's hot or cold outside when you receive your system, let the computer gradually adjust to room temperature for three to four hours before you power it up.

**Caution!**

*If your system arrives in cold weather, do not apply power to the computer or monitor until they have been allowed to come to room temperature.*

## Heat, cold, humidity, and glare

Find a spot for your computer that's not too hot, too cold, too dark, or too bright. Glare can make it hard to read the screen. Overheating can destroy computer components, so allow plenty of room for air to circulate around the case. Do not place your TREK 2 in direct sunlight.

## Surge suppressors

Your computer has its own electrical filters, fuses, and protections, and even its own built-in surge suppressor.

Also, we strongly recommend using a high-quality, external surge suppressor. An external surge suppressor looks like an extension cord with several grounded outlets. It will shield your computer from lightning strikes, surges, shorts and other electrical hazards.

## Where to work

Your TREK 2 generally will run well wherever you're comfortable. But extremes of temperature and humidity can be challenging to your system's parts.

There are, however, some things you can tolerate that the computer can't — things like static electricity, dust, water, steam, and oil. So, whenever you decide to pull over for roadside computing, choose a clean, comfortable work area for your system.

When traveling, your system operates on an intelligent lithium-ion battery pack. Before you run your system for the first time on battery power, remove the battery from its package and install it in the system. Then recharge the battery fully to prepare the battery pack for maximum service.

**Caution!**

*Except for PC cards, never connect or disconnect any equipment or components while the system power is on.*

## System features

This section provides an overview of the TREK 2's features. For more detailed information see the Specifications section in Appendix B.

## Central processing unit (CPU)

The microprocessor (CPU) is the key hardware feature; it is the brain of the computer, performing all the computing functions and orchestrating the actions of the system.

The TransPort TREK 2 supports the Intel Pentium II processor at clock speeds up to 366MHz. All supported Intel processors are available with MMX technology. The MMX media enhancement technology was designed specifically for faster processing of multimedia and communications tasks. The TREK 2 also employs the Intel 440BX core logic.

## L2 cache

The TREK 2 supports a 512KB L2 write back cache with synchronous pipeline burst mode, or 256kb of full bus speed on-die L2 write back cache with synchronous pipeline burst mode (333 and 366 MHz models only) . The external cache enhances system performance, especially in the Windows environment.

## Upgradeable system memory

The TREK 2 has a 64-bit memory bus. Memory can be upgraded to 256MB by the following options:

- One or two 32, 64, or 128MB 144-pin, 3.3V, SDRAM SO-DIMM modules.

## Display

The LCD assembly comes with either of the following display options:

- 12.1" TFT SVGA, 800 x 600 x 64K color resolution
- 14.1" TFT XGA, 1024 x 768 x 64K color resolution

## VGA graphics accelerator

The video subsystem includes 4MB of SGRAM video memory, a 3D graphics engine, and a high performance 32-bit PCI Bus with support for full power management. The video subsystem supports a ZV (Zoomed Video) port and simultaneous display (Simulscan) in all video modes.

## Removable hard disk drive module

The TREK 2 comes with a 2.5" (12.7mm maximum height) hard disk installed. The HDD supports PIO mode 4. The hard drive can also be easily removed and replaced with a second hard drive for expansion. The TREK 2 supports HDDs with capacities of 1.44GB or above, and supports Ultra DMA/33 transfers allowing data transfer rates up to 33 MB per second.

## Removable CD-ROM

The high speed built-in CD-ROM drive allows you to take advantage of the wide array of multimedia titles available, and can be swapped with a Digital Versatile Disk (DVD) ROM drive, or a second HDD.

## Pointing device

The touch pad is a pressure-sensitive pointing device. It allows you to move the cursor around the screen and make selections just as with a conventional mouse.

## Windows 95 enhanced keyboard

The TREK 2 keyboard uses a standard QWERTY layout with the addition of special function keys and an embedded numeric keypad for number intensive data entry. The TREK 2's enhanced keyboard design emulates a full-size desktop keyboard and supports multiple language formats. Your keyboard supports Windows 95 by incorporating two Windows specific keys. With the two Windows 95 keys you will be able to access and take advantage of the many time-saving features of Windows 95 software.

## PCMCIA interface

Two PCMCIA expansion sockets provide an interface for 2 Type II cards, or 1 Type III card (with CardBus support). Your TREK 2's PCMCIA interface supports multi-function (combo) cards and Zoomed Video. The PCMCIA system can accept either 3 or 5 volt cards. PC cards accommodate a number of expansion options, including memory cards, modems, hard disks, and network adapters.

## Serial port

The TREK 2 has a standard 9-pin RS-232 serial port (16550 compatible) that you can use for connecting serial devices.

## Parallel port

The TREK 2 has a 25-pin parallel port which is most commonly used to connect a printer or Pocket LAN to the computer. The parallel port supports both EPP and ECP capabilities.

## IR (Infrared) communication port

The TREK 2 features an IrDA compatible Fast Infrared (FIR) communication module. The FIR module enables you to make serial communication between the TREK 2 and other IR equipped devices such as a printer or another TREK 2 computer.

## USB port

Two USB (Universal Serial Bus) connectors are available for you to connect USB devices. The USB is a personal computer bus endorsed by Intel and others that has a total bandwidth of 1.5-12MB per second, making it much faster than conventional serial ports.

## Audio system

The TREK 2's audio system includes a sophisticated built-in ESS PCI stereo audio-sound generator compatible with Sound Blaster and Microsoft Sound System. The sound system includes amplified output, two built-in, 1 watt stereo speakers, manual volume control and built-in microphone.

### Audio ports

The TREK 2 comes with four audio jacks: a line in for connecting audio equipment for use with the multimedia system; and a line out for connecting stereo speakers, a headphones jack, and a microphone jack.

## External keyboard or PS/2 mouse port

The TREK 2 has a 6-pin connector for connecting a full-size keyboard or a PS/2 mouse.

## VGA port

At the rear of the TREK 2, there is a 15-pin VGA connector for connecting an external CRT monitor.

## TV Out port

This S-video port allows you to view the TREK 2's LCD panel output on a television monitor.

## Keyboard controls

The TREK 2 provides a host of hot key features that are a permanent part of the computer's operation. Some affect the LCD video display, while others control power management.

## Battery and AC power system

The TREK 2 can operate on two power sources; an AC adapter, or the rechargeable battery module pack.

The AC adapter has automatic 100-240V line switching which will automatically check the power voltage coming out of the wall and adjust it to the voltage your computer requires.

The system will automatically recharge the battery pack in the TREK 2 by using the AC adapter. By using the power management features described in using the TREK 2 and BIOS setup chapters, the TREK 2 can operate on battery power for approximately two to three hours. For extended battery-powered operation, additional battery modules may be purchased.

## Security

The password protection feature of your TREK 2 can prevent unauthorized people from accessing important files and information on your computer

**Note:**

*Because the* TREK 2 *computer is available in different configurations, some of the features mentioned in this manual might not be included on your computer or may differ slightly.*

## Accessories and optional devices

To further enhance the utility of your TREK 2 computer, there are several accessories and optional products available.

- ❒ SO-DIMM 3.3V SDRAM modules (32MB/64MB/128MB modules)
- ❒ Port replicator with two type II PCMCIA slots
- ❒ 2nd HDD module
- ❒ DVD-ROM drive
- ❒ Internal V.90 56K fax/modem module
- ❒ MPEG2 video decompression module

## Preparing the TREK 2 for transport

To prepare the computer for transport, you should first disconnect all peripherals. Make sure the computer is turned off before you do this. After disconnecting all peripherals, close the rear port covers to protect the connectors.

The TREK 2's hard disk head is self-parking. This means that the TREK 2 can be directly turned off from the DOS prompt. Close the LCD panel and check that it is latched securely to the computer. Make sure the floppy drive does not contain a diskette. When a diskette is inserted in the floppy drive the eject button pops out. If you attempt to transport the TREK 2 with a diskette in the drive, you risk damaging the eject button.

The computer has an optional soft carrying case. It will keep out dirt and dust and protect your TREK 2's casing from becoming scratched or cracked.

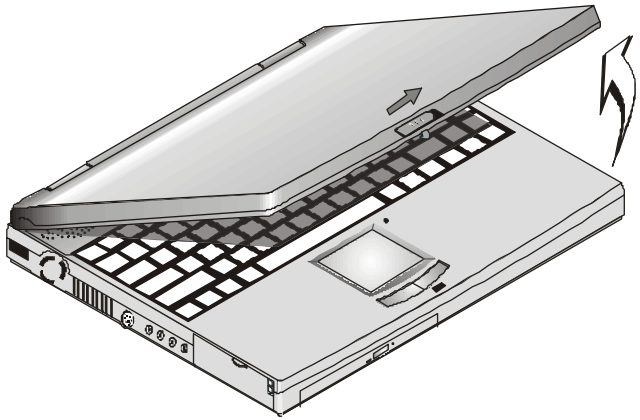
If you intend to use battery power, be sure to fully charge the battery pack and any spares. Remember the adapter charges the battery pack as long as it is plugged into the computer and an AC power source.

## Opening the LCD panel

At the front of the TREK 2 you will find a retaining latch on the display panel which locks the display in closed position when the TREK 2 is not in use. Follow these steps to raise the LCD display cover:

1. Locate the display panel latch at the front of the LCD panel.
2. Slide the display panel latch to the right until the display panel releases, and then raise the LCD screen.
3. Tilt the display to a comfortable viewing position.

Figure 1-2: Opening the LCD display cover



## Front left view

With the LCD screen open, you will see several features important for operating your TREK 2 computer.

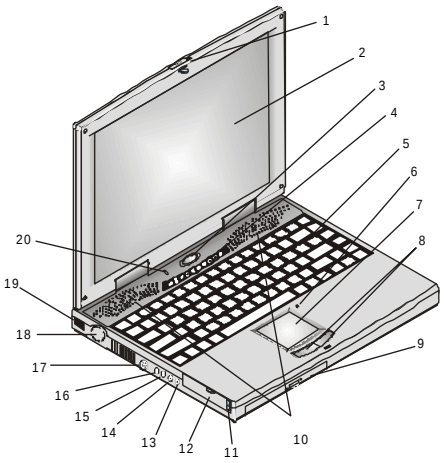



Figure 1-3: The front left view

## 1. LCD cover release latch

Slide this latch to the right to open the LCD cover.

Your TREK 2 computer is equipped with a replaceable color Liquid Crystal Display (LCD) screen. The LCD panel supports 1024 x 768 x 64K LCD resolution utilizing a PCI display adapter. The LCD screen and XGA display circuitry let you view text and the latest high resolution video images.

## 2. Power/Suspend/Resume button

A built-in backlight allows you to comfortably view the screen even when ambient lighting is low. You can also connect an optional external VGA/SVGA color display monitor to the external CRT connector on the rear panel of the computer. When you have connected an external monitor, the computer lets you simultaneously view the LCD screen and the external monitor. For details on connecting an external monitor, see Chapter Four.

## 3. Power/Suspend/Resume button

The button located at the top and center of the keyboard is the power On/Off/Suspend/Resume button. Press and hold the power button for four to six seconds to power the system off. Pressing this button for one second, when the computer is in Suspend mode, will resume normal operation.

## 4. System status indicator panel

The system status indicator panel, located below the LCD screen, keeps you informed of the computer's operating status. These icons are described below, from left to right. There are also three system status indicators — power, suspend, and battery charge — on the LCD cover.

| Icon | Description |
|---|---|
|  | Indicates AC adapter connected when lit |
|  | The A icon indicates the primary battery is being charged (or discharged when the AC adapter is not connected. |
|  | Orange indicates AC adapter is connected and battery is charging. LED is green when battery is fully charged. |
|  | Indicates TREK 2 is is Suspend mode when lit. See Chapter 4 for more information on power modes. |
|  | Appears when computer is accessing PCMCIA slots. See Chapter 4 for more information. |
|  | Appears when computer is accessing the floppy disk drive. See Chapter 4 for more information |
|  | Indicates computer is accessing the hard disk drive. |
|  | Indicates keyboard is in Num Lock mode. See Chapter 4 for more information. |
|  | Indicates when the keyboard is in Cap Locks mode. In this mode, the keyboard produces uppercase text while you press a key. When you press it again, the indicator turns off and the keyboard produces lowercase text. |
|  | Indicates keyboard is in Scroll Locks mode. Some applications will move information differently when Scroll Lock is on. |

## 5. Keyboard

Your computer has an 84-key enhanced keyboard which provides all the functions of a standard 101/102 key keyboard. The embedded numeric keypad allows easy number input.

The keyboard is the primary method of communicating with the computer. You can use your keyboard to enter text and navigate through screen displays. Since you will be spending much time at the keyboard, it is a good idea to familiarize yourself with its layout. The keyboard comes with an ergonomic keyboard base to provide extra support for your wrists while you are typing.

## 6. Built-in microphone

The built-in microphone is located to the right of the touch pad.

## 7. Touch pad

The dual-button touch pad is located below the keyboard. The touch pad is hardware-compatible with the IBM PS/2 mouse and software-compatible with the Microsoft mouse.

Rest your finger or thumb on the pad. As you drag your finger across the pad, the pointer follows your movement. For more detailed information, see Chapter 4.

## 8. Touch pad buttons

The buttons below the touch pad correspond to the left and right buttons on a standard mouse.

## 9. CD-ROM drive

Your TREK 2 comes with a swappable 20X (or faster) 5.25" IDE CD-ROM drive. You'll be able to reference vast amounts of information, take advantage of multimedia programs, watch video CDs, and listen to your favorite audio CDs while working with other applications. The CD-ROM drive is swappable with a Digital Versatile Disk (DVD) drive, and a second HDD.

## 10. Stereo speakers

The internal speakers are located directly below the LCD panel on the left and right side of the TREK 2. These speakers provide true stereo sound.

## 11. PCMCIA socket buttons

The computer has two PCMCIA connectors (two PCMCIA type II connectors or one PCMCIA type III connector). The upper socket is PCMCIA socket "0"; the lower socket is socket "1". The upper ejection button is for socket "0", the lower button is for socket "1".

## 12. PCMCIA sockets cover

Open this cover to access the PCMCIA sockets. The computer's PCMCIA sockets let you extend the capabilities of your computer by inserting PC cards. The cards are hot swappable, meaning you can change cards without having to reboot your computer. There are a wide variety of PC cards available, including data storage, fax/modem, Local Area Network (LAN), wireless communication cards, and more. For a detailed description of using PC cards, see Chapter 4.

### 13. External headphone jack
Connect stereo headphones to this jack to listen to the TREK 2's audio output.

### 14. Line out jack
This is for speaker output. You can plug amplified external speakers or headphones into the speaker output jack, or connect the audio out jack to an audio device such as a cassette recorder to record the TREK 2's audio output. For more information, see Chapter 4.

### 15. Line in jack
This jack is for auxiliary input. The auxiliary input can be used to connect an external audio source (cassette player, CD player, etc.) to your TREK 2. With the proper software you will be able to record this input signal.

### 16. External microphone jack
This mono microphone jack is used to connect an external microphone.

### 17. External keyboard connector
You can connect an external keyboard, numeric keypad, or IBM PS/2 compatible mouse to this socket, marked with the keyboard/mouse icon.

This connector only accepts an external keyboard with a 6-pin (PS/2-compatible) connector. To connect a keyboard with a 5-pin connector, use a 5-pin to 6-pin transfer cable. You can also connect an external IBM PS/2 compatible mouse into this socket.

### 18. Cooling fan
This fan prevents the TREK 2's CPU and other internal components from becoming overheated. Keep this fan unobstructed to allow proper ventilation to the TREK 2's internal components.

### 19. Infrared data port
The Infrared Data Port allows your TREK 2 to become truly wireless. You can use this port to transfer large amounts of data very quickly to any other machine (TREK 2 computers, printers, etc.) which is also equipped with an IrDA-compliant IR port. This allows you to print documents without any inconvenient cable hookups.

### 20. Cover close switch
When you close the LCD cover, this switch turns off the LCD backlight.

## The right view

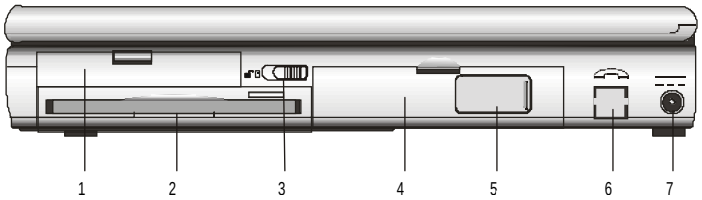



Figure 1-4: The right view

### 1. Removable hard disk drive
Your computer includes a removable 2.5-inch IDE hard disk drive (12.7mm in height) with 1.44GB or more storage capability. The TREK 2 PC's BIOS automatically detects IDE drive types. Consult your dealer for information on changing your TREK 2's HDD.

### 2. Floppy disk drive (FDD)
Your TREK 2 has a 3.5" floppy disk (FDD) installed. The FDD is capable of reading and writing 3.5" 1.44MB floppy diskettes. When the FDD is reading from or writing to a disk, the FDD icon on the LED indicator panel will illuminate.

### 3. Battery lock
Slide the battery lock to the left when removing the battery module from the battery bay.

### 4. Battery
Your TREK 2 comes equipped with a factory-installed battery pack module. After the battery runs down, the module can be removed and replaced with a charged battery. Additional battery packs are optional.

### 5. N/A

### 6. Optional modem
If equipped, there will be an RJ11 connector for modem and fax use.

### 7. DC IN connector
Plug the AC adapter into this connector. Refer to this chapter, Connecting to a Power Source, for more information.

## Rear view

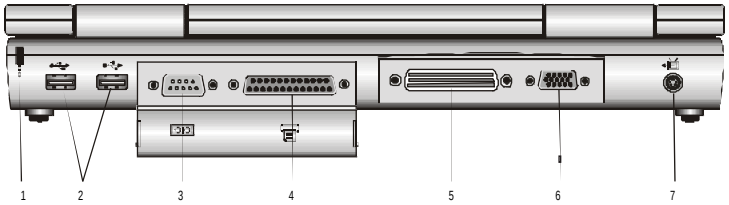



Figure 1-5: The rear view

### 1. Kensington lock keyhole

Your computer includes a keyhole to be used with a standard Kensington lock. You can connect the TREK 2 lock to a large object with the Kensington lock to prevent theft of your TREK 2. See the documentation that comes with your Kensington lock for more information.

### 2. USB ports

Your computer includes two Universal Serial Bus (USB) ports. USB is the latest development in Plug-and-Play technology. It will eventually replace the need for separate connectors for external keyboards, serial ports, and parallel (printer) ports. With broad industry support, USB is sure to play an important role in the design of future peripheral devices. As more and more of these devices become available, your computer will be ready to use them.

### 3. Serial port

This port is used to connect RS-232 serial devices to the TREK 2. Three types of serial devices are; external mice, serial printers, and fax/modems.

### 4. Parallel port

This port allows you to easily connect a parallel printer or plotter using this 25-pin bi-directional female port.

### 5. Port replicator connector

Connect the optional port replicator to the 204-pin port replicator connector. This will further enhance your TREK 2's portability by making it easy for you to connect and disconnect peripheral devices to your TREK 2.

### 6. External monitor port

This port allows you to easily connect an external VGA/SVGA display monitor into your TREK 2 using the 15-pin female connector.

### 7. TV out port

This 4-pin S-Video port allows you to view the TREK 2's Video output on a S-Video Capable television monitor.

## Bottom view

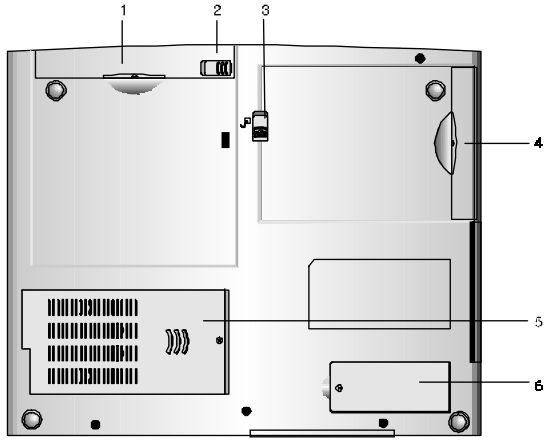



Figure 1-6: Bottom view of TREK 2

### 1. CD-ROM drive
The TREK 2's CD-ROM drive can be removed and replaced with a DVD-ROM drive, or second HDD.

### 2. CD-ROM release latch
Slide this latch to release the CD-ROM drive, DVD-ROM drive, or second HDD from the CD-ROM bay.

### 3. FDD release latch
Slide this latch to release the FDD drive .

### 4. FDD drive
The TREK 2's floppy disk drive is used for floppy disk date storage and retrieval.

### 5. CPU cover
This covers the CPU compartment providing easy access to allow for upgrades. Only experienced service technicians should open this cover.

### 6. Future expansion compartment cover
This compartment houses an expansion MPEG-2 card or a 56K fax/modem.

## Operating environment

You can use your computer under a wide range of environmental conditions. However, to ensure long use and continued high performance, consider the following factors when setting up your computer:

- ❒ Set the computer on a flat, stable surface. To prevent damage to the computer's hard disk drive, avoid using the computer where it will be exposed to strong vibration.
- ❒ Place the computer away from electromagnetic or radio frequency interference (for example, television/stereo sets, copying machines, and air conditioners).
- ❒ Avoid using or storing the computer where it will be exposed to extreme temperatures. In particular, do not leave the computer in direct sunlight, over a radiator, or near a heat source for a long period of time. High temperature can damage the circuitry.
- ❒ Avoid exposing the computer to high or low humidity. Extreme humidity can contribute to disk drive failure.
- ❒ If you are using the computer with the AC adapter, do not allow anything to rest on the power cord. Do not place the computer where people can step on or trip over the cord.
- ❒ The openings on the computer are provided to protect the computer from overheating. To ensure reliable operation, leave about 10 cm (4 inches) around the computer for unobstructed air circulation. Avoid exposing the computer to dust or smoke.

## Connecting to a power source

You can use the provided AC adapter to supply your computer with power from an AC wall outlet. Your computer also comes with a rechargeable battery pack that lets you use the computer without an external power source.

## Connecting the AC adapter

Use the provided universal AC adapter to supply your computer with power from an AC wall outlet. You can also use the AC adapter to charge the computer's battery pack.

The AC adapter converts high-level AC voltage to the much lower level DC voltage appropriate for the computer. The adapter's AC input voltage can range anywhere from 100 to 240 volts, covering the standard voltages available in almost every country.

The power cord for the AC adapter requires a two-hole grounded AC outlet. An optional four- or six-plug power strip is a convenient addition, especially if you have only one wall plug and several devices that need electricity. You can buy power strips with built-in electrical surge protection. This provides limited protection from spikes in the local voltage that can cause damage.

To connect the computer to an external power source:

1. Plug the AC adapter's connector into the DC-IN connector on the right side of the computer.
2. Connect the power cord to the AC adapter and then to a wall outlet. Refer to Figure 1-7.

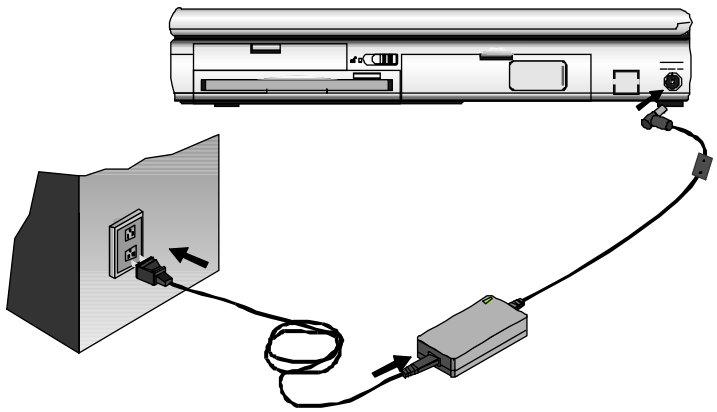


Figure 1-7: Connecting the AC adapter.

## Connecting the AC adapter

***Caution!***

*The best kind of AC power source to connect your* TREK 2 *to is a UPS (Uninterruptible Power Supply). Lacking this, use a power strip with a built-in surge protector. Do not use inferior extension cords as this may result in damage to your* TREK 2. *The* TREK 2 *comes with its own AC adapter. Do not use a different adapter to power the computer, and do not use the AC adapter to power other electrical devices. Damage to the computer that is directly caused by using a different power source will not be covered under warranty*

Whenever possible, keep the AC adapter plugged into the TREK 2 and an electrical outlet to recharge the battery. Although not necessary, it is also a good idea to protect the display panel by always lowering it when the TREK 2 is powered off.

***Caution!***

*Never turn off or reset your* TREK 2 *while the hard disk or floppy disk is in use and the FDD and/or HDD status icon is lit; doing so can result in loss or destruction of your data. Always wait at least five seconds after turning off your* TREK 2 *before turning it back on; turning the power on and off in rapid succession can damage the* TREK 2*'s electrical circuitry.*

## Turning on your TREK 2 Computer

Before turning on your computer, make sure you are familiar with its features. See Chapter 1 for more information.

Now that your TREK 2 is opened and connected to a power source, it's time to turn it on. Press the power button located above the system status indicator panel (see Figure 1-3). Hold the button down for a second or two and release.

The Power-On Self Test (POST) will run automatically. After the POST is completed, the computer reads the operating system from the hard disk drive into computer memory. This is commonly referred to as "booting" a computer.

You are now ready to run software programs and use devices such as printers, disk drives and the CD-ROM.

To turn the TREK 2 off, save your work and close all open applications, click on start, then shut down. In the Shut Down Windows dialog box, select Shut Down and click Yes.

## About the ROM BIOS

Your TREK 2 computer is configured with a customized Basic Input/Output System (BIOS), which is a set of permanently recorded program routines that give the computer its fundamental operational characteristics. The BIOS also tests the computer and determines how the computer reacts to specific instructions that are part of programs.

The BIOS is made up of code and programs that control the major input/output devices on the computer. The BIOS also contains a set of boot routines called the Power-On Self Test (POST) that check the computer when you turn it on.

## About BIOS Setup

When you turn on your computer, the system is configured using default values. If necessary, you can change these system defaults by running the BIOS System Setup program when you boot your computer. For a detailed description of the BIOS System Setup, see Running Bios Setup (chapter eight).

The BIOS System is a ROM (Read Only Memory) based software utility that displays the system's configuration and provides you with a tool to set system parameters. These parameters are stored in non-volatile battery-backed CMOS RAM which holds this information even when the power is turned off. Whenever the TREK 2 is turned on, the system is configured with the values found in CMOS memory.

## About the Power-On Self Test

The Power-On Self Test (POST) runs every time you turn on the computer. The POST checks memory, the main system board, the display, the keyboard, the disk drives, and other installed options.

A few seconds after you turn on your computer, a copyright message appears on your display screen. A memory test message will appear next. The test continues until all installed memory is tested. Normally, the only test routine visible on the screen will be the memory test.

Two kinds of malfunctions can be detected during the POST:

- ❒ Error messages that indicate a failure with the hardware, the software, or the BIOS. These critical malfunctions prevent the computer from operating at all or could cause incorrect results. An example of a critical error is a microprocessor malfunction.
- ❒ Messages that furnish important information (such as memory status) on power-on and boot processes. These non-critical malfunctions are those that cause incorrect results that may not be readily apparent. An example of a non-critical error would be a memory chip failure.

In general, if the POST detects a system board failure (a critical error), the computer halts and generates a series of beeps. If failure is detected in an area other than the system board (such as the display, keyboard, or an adapter card) an error message is displayed on the screen and testing is stopped.

The POST does not test all areas of the computer, but only those that allow it to be operational enough to run any diagnostic program.

If your system does not successfully complete the POST, but displays a blank screen, emits a series of beeps, or displays an error code, contact Technical Support

## Operating system

When starting the TREK 2 for the first time, please note you have either Windows 95, Windows 98 or Windows NT 4.0 already installed on your TREK 2.

## Resetting the system

To reset the system, or "reboot," press the [Ctrl] + [Alt] + [Delete] keys simultaneously. This is known as a "warm boot." This key combination acts as a software reset switch when you encounter hardware or software problems which might lock up the TREK 2.

If this key combination does not shut down the TREK 2, you can reset the TREK 2 by using the TREK 2's power button. Should the TREK 2 lock up for some reason, pressing this button for five seconds powers the TREK 2 off.

## Adjusting contrast and brightness

After turning on your computer, you may want to adjust the brightness of the LCD screen.

To adjust the brightness on the LCD screen, press and hold down the [Fn] key in the lower left hand corner of the keyboard and press the [F7] key to reduce the brightness or [F8] to increase the brightness.

## Operating on battery power

Your computer comes with a rechargeable battery pack that lets you operate the computer without an external power source. When the battery pack is fully charged, you can operate the computer for approximately 2 hours under the following conditions:

- ❒ The battery pack initially has a full charge.
- ❒ No peripheral devices are installed.
- ❒ The disk/CD-ROM drives run no more than 10 percent of the time

## Caution!

*Only use batteries that are provided by Micron Electronics. All batteries are not the same and therefore should not be treated as such. Using the wrong battery could cause serious damage to your computer and yourself through toxic emissions. Damage caused by a third party battery will not be covered by the computer's warranty*

## Inserting and removing the battery pack

The battery pack should already be inserted in your TREK 2 computer when you unpack it. If it is not inserted, follow these directions and refer to Figure 1-8:

1. Turn off the TREK 2.
2. Open the battery bay door. Slide the battery release latch to the left.
3. Insert the battery into the empty compartment. It is designed so that it only fits one way. It should easily "click" into place.
4. Slide the battery release latch to the right and close the battery compartment cover.

To remove the battery pack:

1. Turn off the computer
2. Open the battery bay door. Slide the battery release latch to the left.
3. Lift the battery finger grip and pull the battery from the bay.

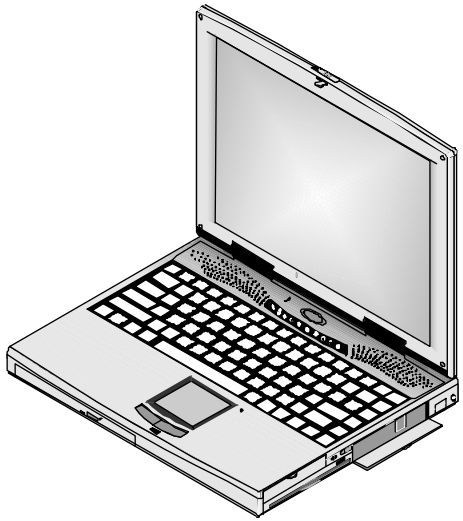


Figure 1-8: Inserting and removing the battery pack.

## Charging the battery pack

The installed battery pack charges automatically any time the computer is connected to the AC adapter and an external power source. The Li-Ion battery can be fully charged in about four hours when the computer is turned off.

**Note:**

*It is a good idea to occasionally discharge the battery pack fully to preserve its operating performance. For details, see "Batteries & Battery Discharge" in Chapter 2.*

## A word about ergonomics

Ergonomics is the study of how people with their different physical characteristics and ways of functioning relate to their working environment (the furnishings and machines they use).

The goal of ergonomics is to incorporate comfort, efficiency, and safety into the design of keyboards, computer desks, chairs, and other items in an effort to prevent physical discomfort and health problems in the working environment.

If your budget permits, buy ergonomically designed furniture such as chairs, shelves, and desks that fit your physical characteristics and work method. If you are going to be sitting for extended periods of time, an ergonomically designed chair may well be worth the extra expense.

You can, however, create an ergonomically improved workstation without spending much money. Following are a few tips to help you work effectively without a lot of physical discomfort:

- ❒ Purchase a chair with armrests and good back support.
- ❒ Don't slouch when sitting; keep your back straight.·
- ❒ Place the LCD panel or external monitor so that it is a little above eye level — when using a word processor.
- ❒ Remember to Scroll Down often to ensure you are reading or typing at the top of the screen; this will help to prevent neck strain.
- ❒ Try to place the LCD panel or external monitor so that there is little glare from the sun on the monitor
- ❒ Walk around the room every hour.
- ❒ Every half hour look away from the computer screen for a few minutes.
- ❒ Place everything that you need to work within easy reach.

# 2. Caring for Your TREK 2

This chapter provides you with information on how to keep your computer in top working condition.

## Preventing problems

Your TREK 2 computer requires little hardware maintenance. But as with any piece of electrical equipment, there are a few simple checks and precautions that will help ensure that your computer provides outstanding performance for many years.

- ❒ Do not block the air flow around the computer. Maintain a distance of four inches (10 cm) between the computer and obstructions.
- ❒ Check the cable and power connectors periodically. Keep your computer away from excessive humidity, direct sunlight, high temperatures, and extreme cold.
- ❒ Do not smoke near your computer.
- ❒ Do not eat near or place liquids near your computer.
- ❒ Avoid dusty environments, as dust can cause damage to disks and disk drives.
- ❒ Never subject your computer to sudden shocks or extreme vibration. Do not drop it or knock it with other equipment.
- ❒ If you suddenly move your computer from a cold place to a warm place, undesirable moisture may condense inside the unit. After sudden temperature changes, let the computer come to room temperature before using it. This allows any moisture inside the computer to evaporate.
- ❒ When possible, use a high-quality electrical surge protector when your computer is powered by the AC adapter. It is also a good idea to unplug your computer when it is not in use.
- ❒ Ensure that your hands are clean when you use the touch pad to prevent oil and dirt build-up which can impair the touch pad operation.
- ❒ Clean your computer's exterior casing occasionally with a soft cloth. Unplug the computer from the wall outlet and remove the battery pack before cleaning. If you use a cleanser, make sure that it is only a mild detergent. Never use solvents like thinner or benzene, or abrasive cleanser, because these may damage the cabinet. After cleaning, allow 30 minutes drying time.
- ❒ Remember to clean your display at regular intervals. Spray window cleanser onto a soft cloth and then wipe the display. Do not spray the cleanser directly onto the display.
- ❒ Clean your keyboard when needed. This can be done with a soft cloth as well as with a keyboard vacuum cleaner.

## Safety instructions

1. Unplug the TREK 2 from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
2. Do not press on or store any object on the LCD cover when it is closed since it may cause the LCD to break.
3. Do not attempt to service the TREK 2 yourself. Unplug the TREK 2 from the wall outlet and refer servicing to an authorized dealer.
4. When replacement of components is required, be sure to replace only with components provided by the manufacturer. Unauthorized substitutions may result in safety hazards.

## Power

1. This electronic device should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
2. This computer is shipped with its own AC adapter. Do not use the computer with a different adapter.
3. Do not allow anything to rest on the power cord. Do not place the TREK 2 where people will walk on the cord.
4. When you disconnect cords, remember to pull them by the plugs and not by the cords themselves. This will prevent damage to the cords, plugs, ports, and jacks.
5. If an extension cord is used with this TREK 2, make sure that the total ampere ratings of the products plugged into the extension cord do not exceed the extension cord ampere rating. Also, make sure that the total current of all products plugged into the wall outlet does not exceed 15 amperes.

## Battery

1. Do not disassemble the battery. The chemicals inside can damage skin and clothing.
2. Keep the battery pack away from fire.
3. Do expose the battery to rain.
4. Replace only with the same or equivalent type of battery recommended by the manufacturer or the authorized dealer.
5. The battery will lose its charge when stored for a long time. Fully charge the battery before you use it again.

***Caution!***

*There is a danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.*

## Traveling with your computer

For safety, security, and convenience when traveling with your computer, follow these guidelines:

- ❒ Before traveling, save your data by backing it up onto floppy diskettes.
- ❒ Take along an extra backup copy of your data.
- ❒ Do not travel with a diskette in the floppy disk drive.
- ❒ Do not transport the TREK 2 with the power on. This may result in loss of data and/or damage to the hard disk drive.
- ❒ Before traveling, disconnect the AC adapter from the computer.
- ❒ Always carry either a spare fully charged battery pack, and the AC adapter.
- ❒ When carrying the computer, take care not to bump it into things. The computer cannot take the kind of treatment that you might give a briefcase.

- ❒ Whenever possible, hand-carry the computer in its carrying case.
- ❒ If you must ship your computer as freight or baggage, pack it carefully. Use the original cartons and foam cushions, if possible. If they are not available, use sturdy cartons and cushion the computer well on all sides.

## Batteries and battery discharge

It is a good idea to occasionally discharge the battery pack fully to preserve its operating performance. Repeatedly recharging the battery pack when it has not discharged completely can decrease the capacity of the battery pack. In the battery pack there is a GAS-GAUGE IC to record the charge/discharge status of the battery.

You can also extend the life of the battery pack by using the computer's power-saving features.

## Discharging and recharging the battery pack

1. Disconnect the AC adapter from the external power source, then from the computer.
2. Turn on the computer.
3. Ignore the power failure signals (i.e., battery warning beeps).
4. When the battery is fully discharged (that is, when the computer goes off), attach an external power source and fully recharge the battery. The battery charge icon on the Status panel indicates when the battery is fully charged.

An incorrect report of the battery status may be shown due to lost data of the GAS-GAUGE IC caused by battery over-discharge. One reason for the battery to over-discharge may be that the battery has not been charged for a long time. If this is the case, a learning cycle is recommended to correct this problem.

The learning cycle is listed as follows:

1. Turn off the TREK 2 and use the AC adapter to charge the computer's battery pack to full.
2. Fully discharge and recharge the battery pack as described above.
3. Remove the battery pack and check the GAS-GAUGE IC. If the indicator shows 100% capacity then the learning cycle is done. Otherwise repeat the learning cycle mentioned above.
4. If after you try the second time and still fail to get the battery pack to 100% capacity, contact your dealer.

## Taking care of the LCD screen

You can extend the life of the LCD screen by caring for the screen as follows:

- ❒ Avoid scratching the surface of the screen. The front polarizer is easily damaged.
- ❒ Use a soft, lint-free cloth for cleaning the LCD screen.
- ❒ Do not allow water droplets to remain on the screen. Water can cause permanent staining.
- ❒ Do not expose the LCD screen to bright sunlight or ultra-violet radiation.
- ❒ Do not expose the LCD screen to extreme temperatures. Freezing and liquefaction (fusing or melting) of the liquid crystals may result in damage to the display.

## Safety precautions

Required safety features have been installed in the computer to protect you from injury. However, you should use good judgment to identify potential safety hazards:

- ❒ Read all of these instructions before using your TREK 2 and save them for later use.
- ❒ Follow all warnings and instructions marked on the product.
- ❒ Unplug this product from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. To clean, wipe with a damp cloth.
- ❒ Do not use this product near water.
- ❒ Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
- ❒ Slots and openings in the cabinet are for ventilation.
- ❒ To ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. This product should never be placed near or over a radiator or heater.
- ❒ Never push objects of any kind into this product through cabinet openings, as they may touch dangerous voltage points or short out parts that could result in fire or electric shock. Never spill liquid of any kind on the product.
- ❒ This product should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- ❒ If you use an extension cord with this product, make sure that the total of the ampere ratings on the products plugged into the extension cord does not exceed the extension cord ampere rating. Also, make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.
- ❒ Adjust only those controls that are covered by the operating instructions, since improper adjustment of other controls may result in damage and may require extensive work by a qualified technician to restore the product to normal operation.
- ❒ Do not attempt to service this product yourself, as opening or removing the cabinet may expose you to dangerous voltage. Refer all servicing to service personnel. Opening cabinent may void warranty.
- ❒ Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
- ❒ If the power cord or plug is damaged or frayed
- ❒ If the product has been exposed to rain or water
- ❒ If the product does not operate normally when the operating instructions are followed
- ❒ If the product has been dropped or the cabinet has been damaged
- ❒ If the product exhibits a distinct change in performance, indicating a need for service
- ❒ Unless the manufacturer indicates that a device can be hot-swapped, you should turn off the computer before connecting peripheral devices.
- ❒ Replace the battery pack only with the same type as the original. Use of another battery pack may present a risk of fire or explosion.
- ❒ Do not use or leave the AC Adapter near a fire, stove, or other hot environment.
- ❒ Do not immerse the AC Adapter in water or expose it to moisture.
- ❒ Do not cover the AC adapter with anything (such as a book, box, paper, etc.).

***Warning!***

*The battery pack may explode if handled incorrectly. Do not disassemble the battery or dispose of it in fire. Keep away from children and dispose of the used battery promptly.*

## Optional port replicator safety precautions

- ❒ Read all of these instructions before using your port replicator and save them for later use.
- ❒ Follow all warnings and instructions marked on the product.
- ❒ Unplug this product from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. To clean, wipe with a damp cloth.
- ❒ Do not use this product near water.
- ❒ Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
- ❒ Slots and openings in the cabinet are for ventilation. To ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. This product should never be placed near or over a radiator or heater.
- ❒ Never push objects of any kind into this product through cabinet openings, as they may touch dangerous voltage points or short out parts that could result in fire or electric shock. Never spill liquid of any kind on the product.
- ❒ This product should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult Micron or your local power company.
- ❒ If you use an extension cord with this product, make sure that the total of the ampere ratings on the products plugged into the extension cord does not exceed the extension cord ampere rating. Also, make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.
- ❒ Adjust only those controls that are covered by the operating instructions, since improper adjustment of other controls may result in damage and may require extensive work by a qualified technician to restore the product to normal operation.
- ❒ Do not attempt to service this product yourself, as opening or removing the cabinet may expose you to dangerous voltage or other risks. Refer all servicing to service personnel.
- ❒ Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - ❒ If the power cord or plug is damaged or frayed
  - ❒ If the product has been exposed to rain or water
  - ❒ If the product does not operate normally when the operating instructions are followed
  - ❒ If the product has been dropped or the cabinet has been damaged
  - ❒ If the product exhibits a distinct change in performance, indicating a need for service
  - ❒ Turn off the computer before connecting a peripheral device.

# 3: Troubleshooting

This chapter describes locating and solving problems that you may encounter while using your computer.

## Locating a problem

Problems with your computer can be caused by something as minor as an unplugged power cord – or as major as a damaged hard disk. The information in this chapter is designed to help you find and solve minor problems. If you try all the suggested solutions and you still have a problem, make a list of what steps you have taken to correct the problem and contact your dealer.

Successful troubleshooting is the result of careful observation, deductive reasoning, and an organized approach to solving the problem.

The problems that you will encounter can be divided into two basic categories: hardware problems and software problems. Hardware problems can be further divided into electrical and mechanical problems. You will know you have a hardware problem if the screen is dark, the computer cannot read the disk drives, or you get an error message during the Power-On Self Test (POST).

Software errors can occur at several levels. The ROM BIOS and the operating system can give you a large number of error messages. On top of this, each application software package has its own set of error messages. It is important to determine whether the software error message you are getting is from the application or the operating system. Once you know this, you can look in the respective manual for a solution to the problem.

## Checking cables and connections

Start by performing a careful visual inspection of the exterior of the computer. If no LEDs are illuminated, make sure that your computer and its peripherals are getting power and communicating with each other properly.

### To check the power cables, and connections:

1. If you have been using battery power, connect the TREK 2 to an external power source and make sure that the battery has a charge.
2. If you are using the TREK 2 with the AC adapter, check the power outlet, the power cord, and any power switches that may affect your computer.
3. Check the wall outlet or power strip with an item that you know is functioning properly. A lamp or radio is a convenient item for checking the power. You may also need to check the fuses and breakers in your electric box.
4. If the outlet is controlled by a wall switch, make sure that the switch is on.
5. If the outlet is controlled by a dimmer switch, use a different outlet.
6. If your computer is plugged into a power strip with an On/Off switch, make sure the switch is on.
7 With the computer's power switched off, check all cable connections. If the computer is connected to any peripheral devices, look for loose or disconnected cables.

8. If the computer is too close to a wall, a cable connection may be loose or the cables may be crimped.

9. When you are certain that you have power available and all connections are good, turn the computer on again.

If the computer still does not start, you may have a hardware problem.

**Note:**

*Do not substitute cables for different devices (other than the manufacturer recommended cables) even if they look exactly alike. The wiring inside the cable may be different.*

## The Power-On Self Test

The Power-On Self Test (POST) runs every time you turn on or reset the TREK 2. The POST checks memory, the main system board, the display, the keyboard, the disk drives, and other installed options.

A few seconds after you turn on your computer, a copyright message appears on your display screen. A memory test message appears next; as the test continues, memory size increases until all installed memory is tested. Normally, the only test routine visible on the screen will be the memory test.

Two classifications of malfunctions can be detected during the POST:

- ❒ Error messages that indicate a failure with either the hardware, the software, or the Basic Input/Output System (BIOS). These critical malfunctions prevent the computer from operating at all or could cause incorrect and apparent results. An example of a critical error is microprocessor malfunction.

- ❒ Messages that furnish important information on the power-on and boot processes (such as memory status)These non-critical malfunctions are those that cause incorrect results that may not be readily apparent. An example of a non-critical error would be a memory chip failure.

In general, if the POST detects a system board failure (a critical error), the computer halts and generates a series of beeps. If failure is detected in an area other than the system board an error message is displayed on the screen and testing is stopped. It is important to remember that the POST does not test all areas of the computer, only those that allow it to be operational enough to run diagnostic programs.
If your system does not successfully complete the POST, but displays a blank screen, emits a series of beeps, or displays an error code, consult Micron.

## Contacting Technical Support

If you still have a problem after reading the preceding sections, the next step is to contact Technical Support. Technical Support can determine if the problem is something that requires the computer to be sent in for evaluation. Before you call your Technical Support, however, prepare the following information:

- ❒ Please have the serial number of the computer ready, this will allow the technical support representitive to see what hardware was shipped to you
- ❒ How is your computer configured? The Technical Support group will need to know what peripheral devices you are using.
- ❒ What messages, if any, are on the screen?
- ❒ What software were you running at the time?
- ❒ What have you done already to try to solve the problem? If you have overlooked a step, your dealer may be able to solve the problem over the phone.

# 4. Using the TREK 2

## Operating the TREK 2

This chapter provides detailed information on how to use the TREK 2's sophisticated hardware features. Most of the TREK 2's hardware features can be described as input and output devices.

An input device is, as its name suggests, a hardware device used to enter information to be processed by the computer. Examples of input devices are the keyboard and the touch pad. An output device, such as an LCD display, monitor or printer, receives data from the computer and displays the information in a human-readable format.

Other hardware components such as the serial port, parallel port and disk drives are both input and output devices, i.e., they can be used for transferring data to and from the computer.

## The LCD display

The TREK 2 comes with a color LCD display panel.

The LCD screen display results can be adjusted by changing the LCD panel angle, and the display brightness.

| Display | Resolution | Color Depth |
|---|---|---|
| 12.1" TFT SVGA | 800X600 | 64K color |
| 14.1 TFT XGA | 1024X768 | 64K color |

## Adjusting the LCD screen display

The LCD screen display can be adjusted by the following key combinations.

| Key combinations | Definitions |
|---|---|
| [Fn] + [F7] | Decreases brightness level |
| [Fn] + [F8] | Increases brightness level |
| [Fn] + [F12} | Switches between LCD and CRT displays |

## LCD care

LCD screens are delicate devices that need careful handling. Please pay attention to the following precautions:

- ❒ When you are not using the computer, keep the LCD screen closed to protect it from dust.
- ❒ If you need to clean your LCD screen, use a soft tissue to gently wipe the LCD surface.
- ❒ Do not put your fingers or sharp objects directly on the surface or spray cleaner onto the display.
- ❒ Do not press on, or store any objects on the cover when it is closed. Doing so may cause the LCD to break.

## External CRT display

You can hook up an external monitor through the 15-pin CRT connector. Three configurations are available:

- ❒ LCD only
- ❒ Simultaneous display of the LCD screen and CRT monitor
- ❒ CRT only

Figure 4-1: The TREK 2 keyboard layout

You can switch between these display configurations by pressing the key combination [Fn] + [F12]. For more information, see page 37.

## Tour of the TREK 2's keyboard

The TREK 2's keyboard uses a standard QWERTY layout with the addition of special function keys and an embedded numeric keypad, and supports Windows 95 by incorporating the two Windows specific keys so you can take advantage of many of the time-saving features of Windows 95 software.

The QWERTY layout means the alphanumeric keys located on the keyboard are in the same position as those found on a standard typewriter. However, there are some keys, such as scroll lock or print screen, whose functions may be unfamiliar to you. This chapter identifies some of these keys and discusses their functions when used with either the disk operating system software or other application software.

This section covers the TREK 2 keyboard and identifies several keys which you will commonly use when working with either the disk operating software or other software. Refer to Figure 4-1 for keyboard layout.

## Key descriptions

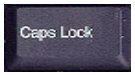

**[Esc]:** The escape key allows you to cancel any specific command you may have just keyed in.


**[PrtSc/SysRq]:** Pressing this key will cause whatever is on the screen at the time to be printed. In Windows 95,98 or NT the Screen will be copied to the clipboard. Note that in some software programs, this key may be used in conjunction with other keys for other specific functions. To use SysRq, press the [Fn] key and the [PrtSc/SysRq] key together.

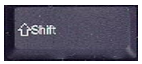

**[Scroll Lock]:** When Scroll Lock is engaged, pressing the cursor control keys moves the cursor by fields of text. Press the scroll lock key once to engage this mode. Pressing it a second time will disengage the scroll lock function.


**[Pause/Break]:** The break key is used in conjunction with the control key ([Ctrl] + [Break]) to cancel a command.


**[Alt]:** Used by itself, the alternate key has no effect in carrying out any commands, but functions with the [Ctrl] and [Del] key ([Alt] + [Ctrl] + [Del]) to reboot or restart your operating system program.




**[Caps Lock]:** The [Caps Lock] key corresponds to a typewriter's shift lock key, but it only affects letter keys. Even with the [Caps Lock] key engaged, if you want to generate the symbols and punctuation marks above the number keys, you must still use the [Shift] key.




**[Shift]:** Similar to the typewriter's shift key, this key allows you to type letters in upper case.


**[Ctrl]:** Used by itself, the control key has no effect in carrying out any commands. Like the [Alt] key, it is always used in combination with other keys. Its function depends mainly upon the type of software you are currently using. Refer to the user's manual of the software you are using for details on how to use this key.

## Windows 95 keys

There are two special Windows 95 keys on the keyboard. A brief description of each key is given below.

The key with the Window 95 logo activates the Start menu button on the bottom left of the screen.

The other key which looks like a menu with a small arrow activates the properties menu and is equivalent to pressing the right mouse button while pointing at any object on the Windows desktop.

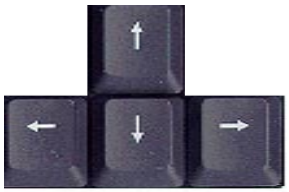
## The TREK 2's hot key controls

| Key Combinations | Definitions |
|---|---|
| [Fn] + [F1] | This key combination enables/disables the mute feature for the TREK 2's audible beeps. |
| [Fn] + [F3] | Increases the speaker volume. |
| [Fn] + [F4] | Decreases the speaker volume. |
| [Fn] + [F7] | Decreases the brightness level. |
| [Fn] + [F8] | Increases the brightness level. |
| [Fn] + [F9] | Toggles the display between the LCD display and an external TV. |
| [Fn] + [F10] | Pressing the key combination switches the display 640 x 480, 800 x 600 and 1024 x 768. The display must be set to 640 x 480 in the control panel beforehand. |
| [Fn] + [F12] | Switches between LCD and CRT displays. |
| [Ctrl] + [Pause Break] | Halts the current operation |
| [Ctrl] + [C] | Halts the current operation without clearing the keyboard buffer |
| [Ctrl] + [Alt] + [Del] | This is the warm boot key combination used to reset the computer. |


Figure 4-2: Function keys

## Function keys

Notice the twelve function keys in the top row of the keyboard, appearing in sequence from left to right. The functions of these keys vary with respect to the operating system and software in use. Refer to the appropriate software user's manuals for more detailed information on function key definitions.



## The cursor keys

The four direction (arrow) keys control the movement of the cursor on the screen. They do not affect the displayed characters.

## Embedded numeric keypad

The embedded numeric keypad consists of 15 keys that make number intensive input more convenient. Like the [Num Lock] key, these keys are labeled in blue on the keycaps. Numeric assignments are located at the upper right of each key. See Figure 4-3.

Figure 4-3: Embedded numeric keypad

When the numeric keypad is engaged, the NumLock icon will appear in the System Window. The keypad is activated by pressing the [Fn] + [NumLk] key. If an external keyboard is connected, pressing the NumLock key on either the TREK 2 or external keyboard will enable/disable NumLock of both keyboards in unison. To disable the TREK 2 numeric keypad while keeping the keypad on an external keyboard activated, use the [Fn] + [NumLk] hot key on the TREK 2 keyboard.

## The system status window

Located above the keyboard, the System Status Window display panel informs you of the TREK 2's current operating status at a glance. If you are having trouble locating the system status window, see Figure 1-3. Upon activating a certain function, a symbol or icon corresponding to that function will appear in the system window until you deactivate that feature. The symbol will remain in the window indicating that the feature is engaged.

Figure 4-4 shows the "System Status Display" with all the icons that can be displayed. A description of each of the icons is listed below.

## System status window icons

Figure 4-4: System status window

AC In: When lit indicates that AC power is connected to the TREK 2 computer.

Battery status: This icon only lights when a battery is inserted in the TREK 2, and the battery is being charged. This icon also lights when the AC adapter is not connected to indicate the battery is discharging.

Battery charger: Lights orange when the battery is being charged. Changes to green when the battery is charged to capacity.

Suspend status: Indicates that the system is in Suspend mode.

PCMCIA activity: Indicates a PC card in one of the PCMCIA slots.

FDD: Indicates when lit that the computer is accessing the floppy disk drive.

HDD Activity: Indicates when lit that the hard disk is being accessed.

## Touch pad

The TREK 2's integrated touch pad is compatible with the PS/2 mouse. A device driver is not required for working with application software that supports PS/2 mouse operation.

## Using the touch pad

The touch pad is a pressure sensitive pointing device that provides all the features of a two-button mouse. Its primary function is to move the cursor around the screen. To use your touch pad:

1. Place your fingers on the keyboard in the normal typing position. The touch pad is easily accessible by moving either your left or right thumb off the space bar and on to the touch pad.
2. Gently move your thumb across the pressure-sensitive touch pad in the direction you want the cursor to move. The pad detects the change in pressure and moves the cursor in the corresponding direction.
3. With a conventional mouse, selections are usually made by double-clicking the mouse's left button. The touch pad also supports this feature. It is described in more detail below.
4. The touch pad offers another method of making selections in a software program. It is called double-tapping. This function corresponds to double-clicking with a mouse. Once the cursor has been moved to the object you want to select, lightly double-tap the pressure sensitive touch pad to select the desired object and start the application.

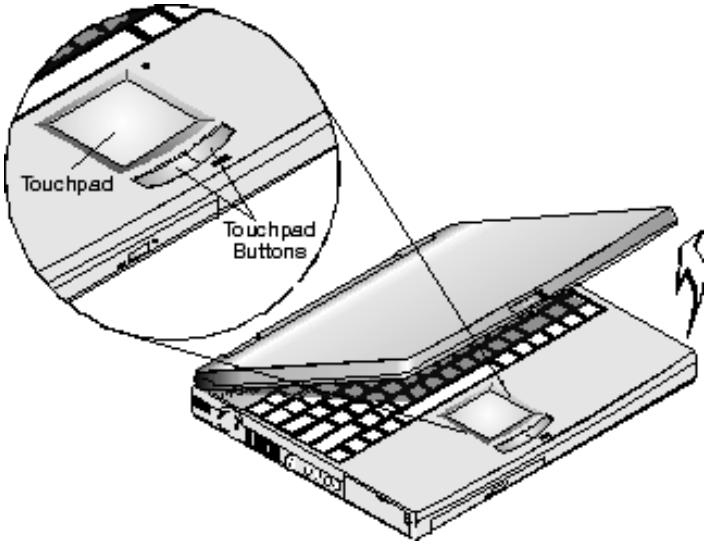



Figure 4-5: The TREK 2's touch pad

5. The buttons located below the touch pad are essentially the same in function as those on a two-buttoned mouse. Clicking these buttons makes selections, drags objects, or performs a variety of other functions depending on the software. To select an object, first move the pointer over the object you want to select, and then press the left button one time. The functions of these buttons are software specific.
6. Double-clicking is a common technique for selecting objects or launching programs from icons. Once you have moved the pointer over the object you wish to select, rapidly press the left button twice.

There are two ways to drag:

- ❒ Move the pointer to the desired location then press down the left button. While still holding down the left button, move the pointer to the desired location. Then release the button.
- ❒ Move the pointer to the desired location. Tap the touch pad twice quickly as if you were double-clicking, however do not remove your finger after the second tap. While maintaining contact with the touch pad, move the pointer to the desired location. Lift your finger to finish dragging.

## Touch pad precautions

The touch pad is a pressure sensitive device. If not properly cared for, it can be easily damaged. Please take note of the following precautions.

- ❒ Make sure the touch pad does not come into contact with dirt, liquids or grease.
- ❒ Do not touch the touch pad if your fingers are dirty.
- ❒ Do not rest heavy objects on the touch pad or the touch pad buttons.

You can use the touch pad with Microsoft Windows as well as non-Windows applications.

## Installing a touch pad driver

The touch pad is internally connected to the computer's PS/2 port. As with a mouse, the touch pad must be enabled and configured in order to function correctly with your software. To use the touch pad with Microsoft Windows, you must enable the Internal PS/2 Mouse in BIOS to use the Microsoft, IBM PS/2 mouse driver, or the attached pointer device driver (for a description, refer to BIOS Setup chapter -- Advanced Menu — Internal PS/2 Mouse).

## Data storage and retrieval

Data storage and retrieval are two of the most fundamental tasks you will perform when working with your computer.

The TREK 2 is equipped with a 3.5" floppy disk drive (FDD) and a hard disk drive (HDD). The hard disk drive is removable, allowing for easy upgrades. These two types of drives and their associated circuitry comprise your computer's main data storage and retrieval system.

## Floppy disk drive

Your TREK 2 features a removable high-density 3.5-inch floppy disk drive module. The floppy disk drive interfaces with the rest of the TREK 2's system via a disk drive controller. The disk drive controller is an integral part of the computer's main board architecture.

The disk drive transfers data between the diskette and memory as requested by the system. The floppy disk drive is designated drive A: by the operating system.

## Using floppy diskettes

The floppy diskette is the most widely used data storage medium for transferring data from one PC to another.

The coated mylar disk is enclosed in a plastic case that protects the disk from damage caused by scratches, bending, and dust.

Insert the diskette into the drive with the label side up. Most diskettes have an arrow to indicate which end goes in first. Slide the diskette all the way in until the diskette eject button pops out. To eject the diskette, push the diskette eject button until the diskette pops out.

When the FDD is being accessed, a green LED below the FDD door will illuminate. A read/write head can carry out four basic operations as prescribed by the disk operating system (Windows 95):

- ❒ Read data currently stored on the diskette
- ❒ Write new data to the diskette
- ❒ Erase data from the diskette
- ❒ Format a diskette

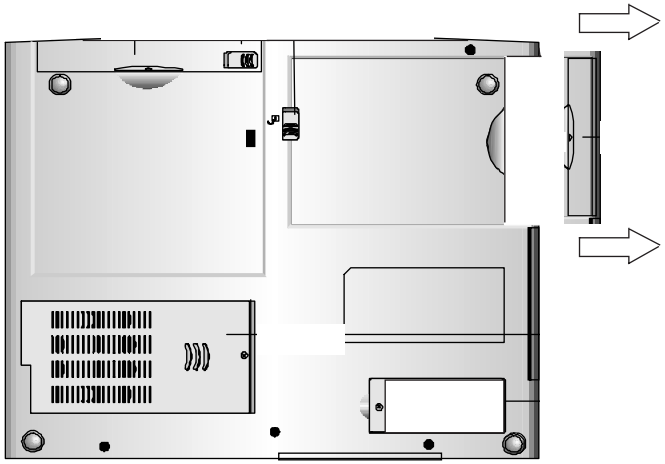
Your computer's floppy disk drive accepts 720KB double-density (2DD) diskettes or 1.2MB and 1.44MB high-density (2HD) diskettes. These diskettes are sometimes labeled by the manufacturer as double density 1.0MB and high-density 2.0MB diskettes. These labels, however, indicate the unformatted capacities of the diskettes. The TREK 2 FDD also supports a 1.2MB format in accordance with NEC PC compatibility. The floppy disk drive is assigned as Drive A.

## Removing the floppy disk drive

The floppy disk drive is removable and swappable with other modules to give you versatility while minimizing weight and size. To remove the floppy disk drive:

1. Save your work and turn off the computer.
2. Turn the TREK 2 over so that the rear ports are facing you.
3. Slide the FDD release latch in the direction of the arrow indicated in Figure 4-6.

Figure 4-6: Removing the floppy disk drive



1. Pull on the FDD finger grip as indicated in Figure 4-6 to slide the FDD module out of the bay.
2. To insert the FDD module, slide the module into the drive bay so that it mates with its connector. You will hear the release latch click shut.

## Caring for diskettes

Under normal conditions a diskette's rigid plastic case will protect it from damage. However, data stored on floppy diskettes are easily corrupted. Follow the protective measures listed below to preserve the integrity of data stored on floppy diskettes.

- ❒ Never touch the magnetic surface of the disk. When handling diskettes, take care that you don't drop them. Keep diskettes away from liquids.
- ❒ Never turn off, reboot, or reset the computer when a diskette is in the drive and the drive activity light is on. Do not transport the computer with diskettes inserted in the drive.
- ❒ Do not expose diskettes to extreme temperatures or high humidity.
- ❒ Keep diskettes away from magnetic fields generated by power supplies, monitors, magnets, etc.
- ❒ Don't smoke in the same room where diskettes are used or stored. Particles from cigarette smoke are large enough to scratch the surface of the disk. Store diskettes in a dry, dust-free environment.

***Caution!***

*Never turn off or reset the* TREK 2 *while the FDD LED is on. Always store your diskettes in a dry, clean container, to protect them from the environment and magnetic fields.*

## Removable hard disk drive module

A hard disk, like a floppy diskette, magnetically stores data and retains that data when the computer is turned off. Hard disk drives have higher capacities and operate at much faster speeds than floppy disk drives.

Your TREK 2 comes equipped with a hard disk drive already installed and prepared for operation. Your computer's hard disk drive is an integrated drive electronics drive, commonly referred to as an IDE drive, with a form factor of 2.5 inches. IDE drives have become an industry standard for PC hard drives because they provide a reliable, fast, and cost-effective mass storage solution.

The formatted capacity of the TREK 2's HDD is 1.44GB or above.

## Disk caching

A disk cache is used to increase hard disk performance. It sets aside a portion of the computer's system memory where frequently used data from the hard disk is temporarily stored. Because typical memory access time is several thousand times faster than disk access time, a disk cache can yield a phenomenal increase in your computer's overall performance.

The SMARTDRV.EXE program included with MS-DOS is an example of a program that can be used to implement a disk cache. This program allows you to specify the amount of memory to be used as a disk cache. Refer to a DOS manual for instructions on the SMARTDRV.EXE program.

Windows 95, 98 and NT 4.0 have a cache utility built in.

**Note:**

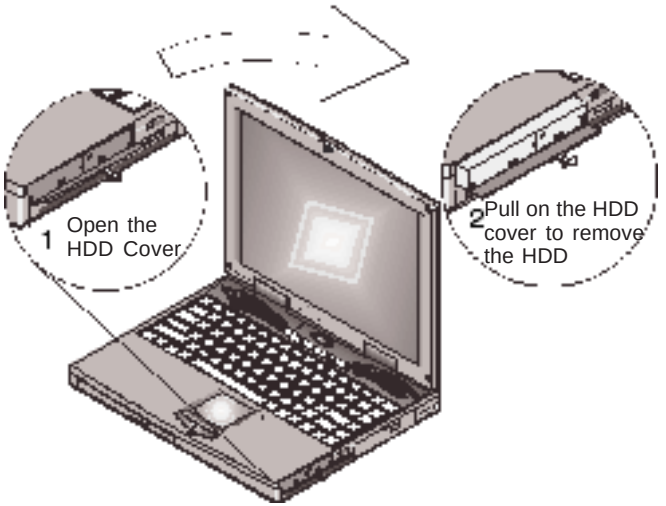
*If a program's documentation specifies to disable a memory cache, it's not referring to a disk cache program like SMARTDRV.EXE. Memory cache is different from a disk cache. A disk cache is used to speed up disk access, whereas a memory cache is normally used to speed up access to DRAM.*

## Removing and replacing the hard disk drive

The TREK 2's hard disk is easily removed and replaced to allow easy upgrades. To remove the hard disk drive:

1. Open the HDD cover. Refer to *Figure 4-7*.
2. To reinsert the HDD module simply slide the hard disk drive into its bay until it mates with its connector.
3. Close the HDD cover.

Figure 4-7: Removing the HDD module



## CD-ROM

This section covers the information you need for playing both CD-ROM titles and music CDs.

The TREK 2 comes with a built-in CD-ROM drive module. The CD-ROM drive employs sophisticated laser and drive technology, yet requires very little maintenance. The CD-ROM drive allows you to run the latest multimedia CD titles providing a new educational and entertainment dimension to your personal computing experience.

The CD-ROM module can be swapped with a Digital Versatile Disk (DVD) module, or a second HDD. DVD drives are the next generation of high capacity CD-ROM drives. DVD discs are the same diameter as a CD-ROM, but can be recorded on both sides. Each side has a capacity of 4.7GB making each DVD equivalent to 14 CD-ROMs if both sides are used. DVD players are compatible with audio CDs, CD-ROMs, CD-I discs and video CDs, but not first-generation CD-ROM disks. Trek2 does not allow DVD output to a television.
Second HDDs allow further expansion and versatility for your TREK 2, allowing you to store large multimedia files.

## DVD FCC Number:

9420961

## Features of the CD-ROM module

The features of the CD-ROM include:

- ❒ Audio play feature allows you to play music CDs
- ❒ Front panel load/unload button
- ❒ 640 MB capacity
- ❒ MSCDEX compatible
- ❒ Supports CD-DA, CD-ROM mode 1 and mode 2
- ❒ Multi-Session Photo CD, CD-I/Video CD (ps.)
- ❒ Low power consumption
- ❒ 12.7mm height

## Removing the CD-ROM drive

The CD-ROM drive is removable and swappable with other modules to give you versatility while minimizing weight and size. To remove the CD-ROM drive:

1. Save your work and turn off the computer.
2. Turn the TREK 2 over so that the rear ports are facing you.
3. Slide the CD-ROM release latch in the direction of the arrow indicated in Figure 4-8.
4. Pull on the CD-ROM finger grip as indicated in Figure 4-8 to slide the CD-ROM module out of the bay.

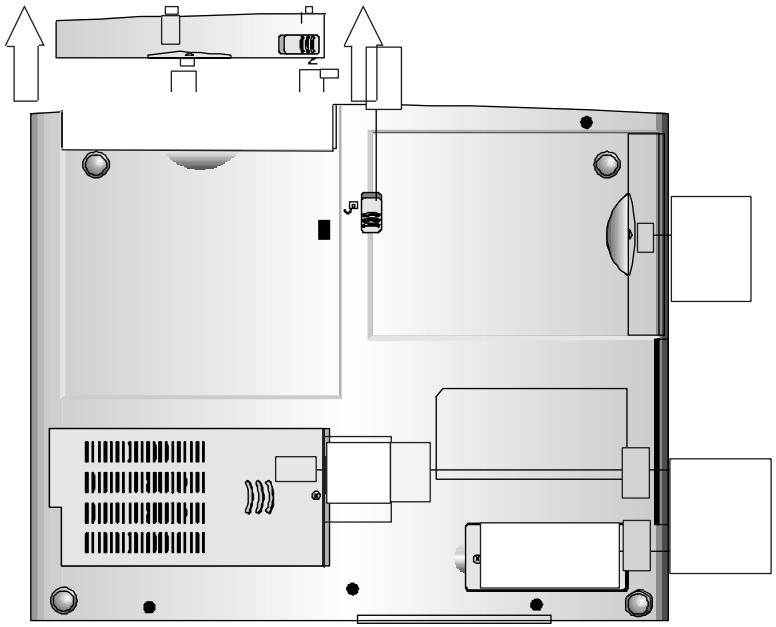


Figure 4-8: removing the CD-ROM drive

## Installing the CD-ROM drive

1. To insert the CD-ROM module, slide the module into the drive bay so that it mates with its connector. You will hear the release latch click shut.

## Precautions for handling CD-ROM disks

Keep these precautions in mind when handling CD-ROM disks.

- ❒ Always hold the disc by the edges, avoid touching the surface of the disk.
- ❒ Use a clean, dry, cloth to remove dust, smudges, or fingerprints. Wipe from the center outward.
- ❒ Do not write on the surface of the disk.
- ❒ Extremes in temperature may damage disks. Store discs in a cool dry place.
- ❒ Do not use benzene, thinners, or cleaners with detergent. Only use CD-ROM cleaning kits.
- ❒ Do not bend or drop the disks.
- ❒ Do not place objects on top of disks.

## Loading a disc

To play a CD disc, follow the instructions listed below.

1. Push the CD-ROM eject button on the CD drive door, found on the front of the computer. Gently pull the tray all the way out.
2. Carefully lift the CD-ROM by the edges and make sure the shiny surface is face down (the side with no writing on it). Carefully insert the CD-ROM onto the tray. Push the CD-ROM down gently so that it snaps onto the center ring.
3. Push the tray back into the drive.

To remove a CD-ROM, do the following:

1. Check the LED display and make sure that the computer is not accessing the CD-ROM drive.
2. Push the eject button and pull the tray all the wayout.
3. Carefully pick up the CD by the edges and – while pressing down on the center ring – remove the CD-ROM from the tray. Push the tray into the computer until it closes

**Note:**

*Do not insert any foreign objects into the disc tray. When not in use, keep the tray closed to prevent dust or dirt from entering the drive unit. If you experience difficulty when ejecting the CD disk tray, stretch a paper clip (or use a pin or a thin metal rod) and insert it into the emergency eject hole located on the right side of the front panel. The CD disk tray should eject immediately. This procedure can also be used to remove a CD from the drive when the* TREK 2 *is powered off.*

## Reading CDs

The CD-ROM drive is designatetd drive D by default. However, it's treated as a low-priority device by the system. For example, if you have other drives installed, they take precedence over the CD-ROM. The CD-ROM will always surrender to the designated next priority drive.

## CD types

There are a variety of CD products on the market. They go by various names, such as CD-I, CD-Title, Audio-CD or Video-CD. Before playing a CD, you should determine what type of CD it is, and run a playback program capable of running that type of CD.

Windows NT comes with a mini-application that will run different types of CDs. Try it by clicking start, applications, multimedia and media player.

## The multimedia sound system

The TREK 2's built-in audio capabilities allow you to take advantage of a wide range of education and entertainment multimedia software.

The multimedia sound system features a sophisticated on-board digital audio generator that produces realistic, music and human voice sounds in 16-bit stereo.

The TREK 2 is equipped with two internal stereo speakers, a microphone, and both input and output audio ports for external audio units. An external microphone can be connected to the microphone jack. External speakers or headphones can be connected to the TREK 2's audio-out jack. External audio devices can be connected to the Line in jack. All audio features are software controlled. The TREK 2's multimedia sound system includes the following features:

- ❒ An ESS PCI chip set
- ❒ Supports Sound Blaster game compatibility
- ❒ Supports Windows Sound System compatibility
- ❒ Full Duplex operation
- ❒ Hardware and software master volume control
- ❒ 64-Voice Wavetable synthesizer with Directsound support
- ❒ Dynamic filtering reduces noise and distortion rate
- ❒ 16-bit digitized audio playback
- ❒ A built-in microphone for convenient recording
- ❒ Two built-in stereo speakers
- ❒ Digitized audio recording through the TREK 2's built-in microphone or any external source

## Audio volume control

The TREK 2 is equipped with hot-key volume controls: Pressing the [Fn] + [F3] hot-key combination decreases the audio output volume, press the [Fn] + [F4] hot-key combination to increase the volume.

## IR communication

The TREK 2 is equipped with an Infrared (IR) communication module located on the left side of the TREK 2. If you are having trouble finding this module, please see Figure 1-3.

The IR module consists of one Light Emitting Diode (LED) and one photo sensor. The LED functions as a transmitter and the photo sensor acts as a receiver. The transmitter emits a signal stream consisting of data in the form of pulses of infrared light. The receiver picks up pulses of infrared light transmitted by other IR modules.

The IR module enables you to perform wireless, serial communication. Use an FIR-specified application to transmit or receive data via the TREK 2's FIR module.
The following table briefly describes each of the IR modes available. You must set these modes in BIOS. Please refer to the BIOS setup chapter for information on the BIOS Setup program.

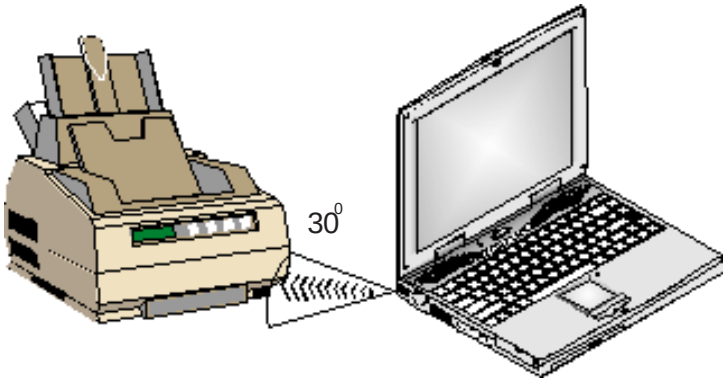
| IR Type | Description |
|---|---|
| **FIR** | Fast Infrared. |
| **IrDA** | Infrared Data Association protocol |

Follow the guidelines listed below when using the infrared communication module to transmit or receive data.

- ❒ Make sure the infrared communication field in the BIOS Setup program is set to FIR. Refer to Chapter Five for information on the BIOS Setup program.
- ❒ Ensure that the TREK 2's FIR module is properly lined up with the other device's infrared communication module. The angle between the two Infrared Communication modules should not exceed ±15°.
- ❒ There should be a clear, unobstructed path between the two infrared communication modules; otherwise the optical signal will be blocked. Likewise, do not place anything between the two infrared communication modules during data transmission.
- ❒ Make sure the distance between the TREK 2's FIR module and the other device's infrared communication module does not exceed one meter.
- ❒ Do not move either the TREK 2 or the other device during transmission of data, otherwise data transmission will be distorted resulting in loss of data or a system crash.
- ❒ An error can occur if FIR transmission is conducted in an environment with high levels of noise. To avoid transmission errors do not transmit infrared communication signals near equipment with compressors, such as refrigerators or air conditioners.

Refer to Figure 4-9 to set up the FIR transmitter and receiver.

Figure 4-9: FIR wireless communication




## PCMCIA cards and expansion sockets

The TREK 2 features two PCMCIA expansion sockets designed to interface with one or two Type II cards, or one Type III card.

This sophisticated innovation allows you to expand and customize your computer to meet a wide range of computing needs without sacrificing portability. PC cards accommodate a number of expansion options. Memory cards, modems, hard disks, and network adapters are just a small sample of the PC card products available on today's market.

## Using PCMCIA cards

The PCMCIA (Personal Computer Memory Card International Association) is a widely accepted industry standard that defines the design and operation of PC cards. PC cards that conform to the PCMCIA standard are plug-and-play devices, i.e., they can be inserted into the PCMCIA expansion sockets while the computer is powered on. This type of hot insertion does not apply to all PC cards. Refer to the documentation that came with your PC card for detailed information on the operation of PC cards.

## Inserting a PCMCIA card

The computer will emit a medium tone followed by a high tone when a PC card is inserted. When you eject a card, the computer will emit a high tone followed by a medium tone. You can insert and remove a PC card whether the computer is turned on or off.

Follow these instructions and refer to Figure 4-10 to insert a PCMCIA card:

1. Hold the PCMCIA card with the label side up and the connector side toward the socket.
2. Align the card connectors with the appropriate socket and carefully slide the card into the socket until it locks into place. The system will beep once to indicate that it has detected the PC card.
3. The eject buttons are located next to each slot on the right. Note that there are two eject buttons, one per slot. To remove a PC card push the respective eject button, the button will pop out, push the button again to eject the PCMCIA. The upper button will eject a Type II PCMCIA card from the upper socket. The lower button will eject a Type II or Type III PCMCIA card from the lower socket. Then remove the card and store it properly.

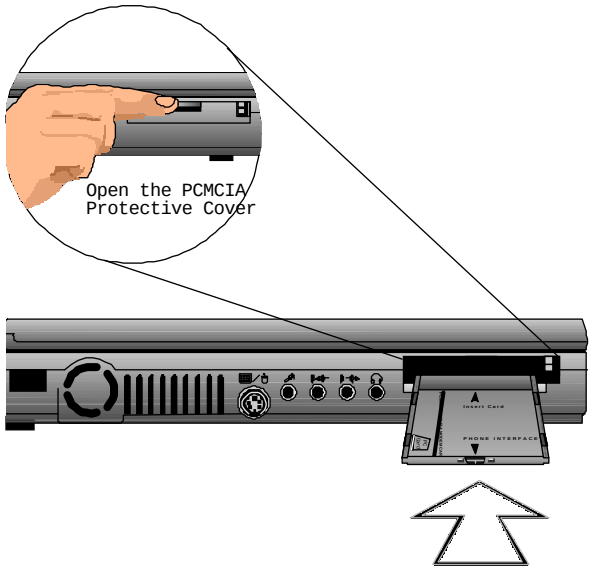



Figure 4-10: PCMCIA card installation and removal

**Note:**

*When inserting a Type III PC card, make sure the connector is inserted in the lower socket. Before ejecting a PC card, ensure that it is not being accessed by the system. Memory card users must never change a card's write protect switch while the card is inserted into a PCMCIA socket. To change the switch setting, (a) eject the card, (b) change the switch setting, and (c) re-insert the card.*

## Adding / Upgrading your memory

To upgrade memory, perform the following steps:

1. Above the F2 key and the Insert key(Ins) there are slider tabs. Slide these tabs inward toward the center of the keyboard, as illustrated in figure 4-11.
2. Take a standard sized pen and place it in the uncovered section of the tab.
3. Gently push the pen toward the LCD and lift the keyboard upward. Your keyboard should easily lift up and fold toward the front of the machine, as illustrated in figure 4-12.
4. Lift the silver shield up and away.
5. The upgraded, larger capacity memory module should always be placed in Slot 0, which is the slot closest to the battery compartment.
6. If a smaller capacity module is already populating Slot 0, move the tabs outward slightly to release the module. Remove the memory module at a 45 degree angle.
7. Insert the new, larger capacity module at the same 45 degree angle. Press gently until you hear a click.
8. Continue this process with additional memory modules in the left slot (Slot 1).

**NOTE:**
*The TREK 2 AGP only uses SDRAM and not EDO memory.*

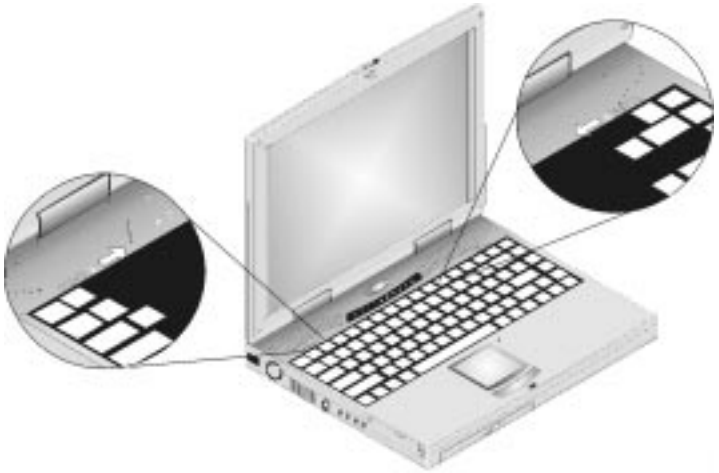


Figure 4-11: Slider Tabs

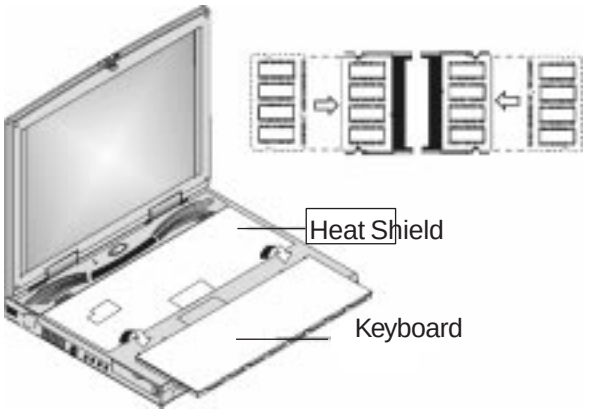



Figure 4-12: Keyboard Removal

## About power saving modes

This section contains information on the TREK 2's power system, including the AC adapter, the battery system, recharging the battery, and tips for conserving battery power. Also included are detailed descriptions of power management and each of the power modes.

The power system is comprised of two parts, the AC adapter and the battery system. The AC adapter converts AC power from a wall outlet to the DC power required by the computer. The battery pack is a set of lithium-ion (Li-Ion) or nickel-metal hydride (Ni-MH) batteries housed in a plastic shell. There is one pack inserted in the battery housing of the computer.

## The AC adapter

The AC Adapter's primary function is to provide power to the TREK 2. When the adapter is connected to the computer, it provides power as long as it is plugged into an electrical wall outlet. If the AC Adapter is not functioning properly, please consult your dealer immediately for support.

## The battery power system

The TREK 2's Li-Ion removable battery pack is found in the battery compartment. Please see Figure 1-4 if you are having trouble locating the battery compartment.

A fully charged pack will provide approximately 2 to 3 hours of battery life. The battery life can be extended by using the power management features. The battery system implements the smart battery standard which allows the battery to accurately report on the amount of usable time and charge percentage left in the battery before recharging is required. Additional battery packs are optional equipment and can be purchased separately.
Before using the computer on battery power for the first time, check the battery status icon on the Windows Toolbar to make sure the battery is fully charged. See ***Battery Status*** later in this section for a description and explanation of the Windows Battery icon.

## Removing the battery pack

To remove the battery pack from its compartment, please refer to Chapter One, Inserting and Removing the Battery Pack.

## Preparing the battery pack for use

Before using the battery pack for the first time, the Smart Battery IC within the battery pack should be calibrated in order to get accurate reporting of remaining battery life status. To calibrate the battery pack follow the instructions below:

1. Insert the battery into the battery compartment and turn on the TREK 2 (Refer to Chapter One, Inserting and Removing the Battery Pack). If the battery is completely without power go to the next step. Otherwise, let the battery run down until the battery low warning beeps are heard. The system will automatically enter Suspend mode.
2. Turn the TREK 2 off. Connect the AC adapter and let the battery fully recharge. When the battery charge indicator turns off, the battery is fully charged.
3. The battery pack is now calibrated properly.
   In general, using the battery until the low battery warning indicator appears and fully recharges the battery each time (full discharge/charge cycle) will ensure the accurate reporting of the battery gauge status.

## Automatic battery pack charging function

You can automatically charge the battery pack by using the AC Adapter.

When running the TREK 2 off AC power, the inserted battery pack will automatically be recharged while you are working on your TREK 2. The charge time is about four hours (Li-Ion) when the TREK 2 power is turned off.

The following table summarizes the charging modes:

| Charge Mode | Charge Time |
|---|---|
| Fast | Li-Ion Battery Pack<br>4 hours with the system off or in Suspend mode. |
| Trickle | When the system is on or off, a trickle charge is supplied to the battery pack to maintain full charge capacity charge. |
| Pre-Charge | A pre-charge is supplied to the Li-Ion battery pack. |

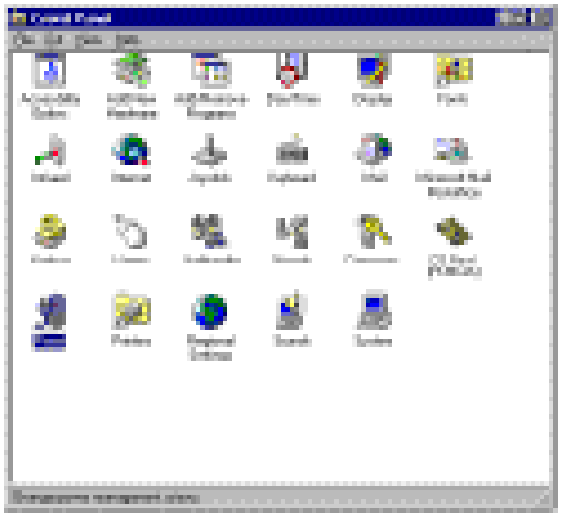
## Using battery power

The battery system will provide approximately 2 to 3 hours of power to the TREK 2. This figure will vary depending on how you use the power saving features, your general work habits, and the type of CPU and LCD your TREK 2 has. We recommend that you use the AC power adapter as often as possible to conserve battery power.

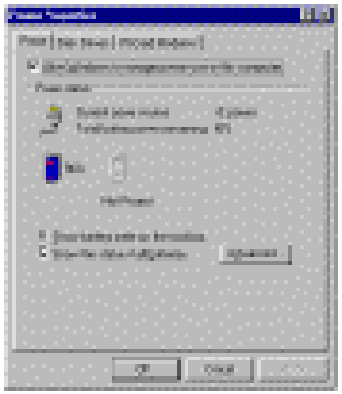
The System Window will indicate the status of the battery pack when you are using battery power, while the time and charge remaining can be obtained under DOS or Windows 95 due to implementation of the smart battery standard.

## Battery status

Windows 95 and Windows 98 have an applet in the Control Panel that will display an icon in the Windows taskbar indicating when the TREK 2 is running on battery power or is attached to the AC adapter. This applet also displays a meter that indicates how much charge is remaining in the battery. To open this program click on Start, then Settings. Click the Control Panel icon.



In the Control Panel, double click the Power icon. The following screen will appear

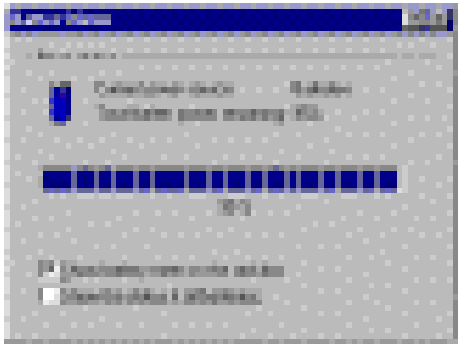


Click the box next to Show battery meter on the taskbar to have the power icons displayed on the Windows taskbar.

When the AC plug is displayed, it indicates that the AC adapter is attached to the TREK 2.

When the battery icon is displayed, it indicates that the TREK 2 is running on battery power.

Double click the battery icon to display the following screen:



This screen indicates how much battery charge remains. If the battery charge drops below a certain voltage level, a beeping sound will prompt you to save your work and turn off the computer, or connect the AC adapter.

## Battery low warning

When the pack initially reaches the “Battery Low” state approximately 10 ~ 15 minutes of the usable battery life is left. You will hear an audible beep signal every 1.5 seconds alerting you to the “Battery Low” status. When the battery power reaches the “Battery Low Low” status the beeping sound will accelerate. Your battery now has one to two minutes of battery charge remaining. You must save your data or connect AC power immediately; otherwise, you may lose your data.

**Note:**

*The* TREK 2 *can not be powered on while the battery is in the “Battery Low” state: To power the* TREK 2 *on once the battery pack has reached the “Battery Low” state, the AC adapter must be connected.*

| Sound | Meaning |
|---|---|
| Continuous beeping every 1.5 seconds | **Battery Low:** Indicates that there is 10 to 15 minutes charge remaining. |
| Beeping accelerates | **Battery Low Low:** Indicates that there is 1 to 2 minutes of battery charge remaining. Save your work and turn off the TREK 2, or connect the AC adapter. |

When there is only one minute of battery charge remaining, the TREK 2 will suspend to the HDD (if a PHDISK HDD partition has been set) and power off. If a PHDISK HDD partition has not been set the TREK 2 will suspend to DRAM. You should connect AC power and resume to save your work. Windows 95/98 has a smart battery function that allows you to change the settings for the battery warning signals.

Please consult the Windows 95/98 help for details.
To extend battery power, we recommend that you make full use of the TREK 2's built-in power saving features.

## Small battery for the real time clock

There is a small built-in battery pack that supplies power to the system in order to maintain certain system information while the power is off. If the TREK 2 is left without a power source for too long, this battery will be exhausted and system information will be lost. Please avoid this condition by ensuring that the TREK 2 never remains without a power source for more than ten days.

### Caution!

*Never remove the battery pack while the power is on as this may result in data loss when the system loses power.*

## Power management habits

While operating the TREK 2 on battery power, it is important to develop good power-saving habits to maximize battery life. Although the TREK 2 provides automatic power-saving features that can be enabled, you can still improve on them by keeping power conservation in mind.

## Conserve battery with AC adapter

The most obvious way to conserve battery power is to avoid using the battery when there is an available AC power source. The AC Adapter is lightweight and compact, so it is very convenient to bring along while traveling. By using the AC adapter as much as possible, you can ensure you will have a charged battery whenever you really need it.

## The suspend/resume feature

If you need to temporarily step away from the computer, press the power button for one second to put the computer into Suspend mode. When you return, just press the power button for one second to restore the system to the point where you stopped.

## Screen brightness

The brighter the LCD display screen is, the more electricity it requires. Avoid setting the screen brightness level higher than necessary to extend the duration of battery power.

## Power management modes

The computer has a number of automatic or adjustable power saving features which you can use to maximize battery life. You can control some of these features through the Power menu in the Setup program. Refer to the Running BIOS setup, Chapter eight, for a detailed description of the BIOS Setup program. The computer is made up of electronic components, all of which consume electricity to operate.

Yet, some components consume much more than others. The power management features are designed to save as much electricity as possible by putting these components into a low power consumption. These low power modes are referred to as Standby mode and Suspend mode. Standby mode is also commonly known as System Sleep mode.

## Full power mode

The computer operates in Full Power mode when power management is disabled. When the computer is operating in Full Power Mode, the Power LED remains on. If you are conscious of power consumption, you will probably rarely operate the computer with all power management features disabled.

## Standby mode

In addition to reducing the CPU speed, this mode puts peripheral components in their lowest active states. These peripheral components include the hard disk, the LCD screen and the screen backlight. The TREK 2 enters Standby mode when the system remains idle for a specified amount of time. Press any key to resume system operation.

## Suspend mode

In Suspend mode, the CPU power is turn off and most of the computer's peripheral components are put in their lowest active states. The computer enters Suspend when the system remains idle for a specified amount of time. Press the Power button to resume system operation.

## A suspend example

The time out settings for Hard Disk Off, System Standby, and System Suspend specify the amount of time the system must be inactive before the next power management level is enabled. The example below demonstrates this function. If the Hard Disk Timeout is set to 2 minutes, the Standby Timeout to 8 minutes and Auto Suspend Timeout is set to 10 minutes the following power management events take place:

1. After two minutes of system inactivity the hard disk spins down.
2. After six additional minutes (a total of eight minutes of inactivity) the system enters Standby.
3. After 10 additional minutes in the system Standby mode, the system suspends to memory or disk.

After the system has suspended, operation can be returned (resumed) to the point in your application where it was suspended.

## How to suspend

The system can be suspended in the following ways:

- ❒ System enters Auto Suspend. This is enabled by setting a time out period for the Auto Suspend field in the Power menu. This time out period is the amount of idle time that the system allows before a Suspend is initiated.
- ❒ System suspends to hard disk when battery level is critically low. A PHDISK partition must be created on your hard drive to enable this feature. Refer to the PHDISK chapter for details.
- ❒ Pressing and holding the power button for one second.

## The chain of suspend events

If the system enters Suspend mode from the above options, it enters the best power-saving Suspend mode that is supported by the system. When the system suspends, the following events take place:

- ❒ The video screen is turned off
- ❒ CPU, DMA clocks, and the math co-processor, are powered down
- ❒ All controllable peripheral devices are turned off

If the system is left in DRAM Suspend mode long enough to consume all battery power, then the Suspend indicator goes out and all unsaved data in the computer's memory are lost. The system cannot resume until the battery is recharged or the TREK 2 is connected to AC power.

The amount of time that the system remains suspended depends on the amount of battery power remaining. Due to this limitation, you should always save your data before the system suspends.

## How to resume

Pressing the power button for one second causes the system to resume operation after entering Suspend. Resuming returns the system's operation to the point in your application where the suspend was initiated. This does not mean, however, that all devices are powered up. When the system resumes, the following events occur:

- ❒ DRAM refresh memory returns the system to the application that was running before the Suspend operation
- ❒ The video is turned on.
- ❒ The COM ports are enabled.
- ❒ Then, each device is powered on when it is requested for use by the system.

## Power management summary

The following table summarizes the TREK 2's power-saving features:

| Power mode | How to enter mode | How to reactivate |
|---|---|---|
| System idle | Transits automatically | Press any key, Access HDD |
| System standby | Transits automatically after specified time out | Press any key |
| System suspend (Suspend to Disk or Suspend to RAM) | Transits automatically after specified time out.<br>Press power button.<br>Battery low state. | Press the power button |
| Hard disk spin down | Transits automatically after specified time out | Access HDD |

## The APM interface

In addition to the power saving features built into the resident BIOS System Configuration Utility, your TREK 2 computer also supports the Intel-Microsoft Advanced Power Management.

APM is a cooperative interface that enhances the TREK 2's built-in power management features by providing one of the most accurate schemes for detecting true idle. This allows APM implementation to put the CPU in a lower power state with no loss in user performance.

If APM is installed and properly configured, and power management is enabled in the Setup program, APM functions in the following manner:

- ❒ Takes over power management from system BIOS
- ❒ Constantly monitors all system activity to provide one of the most accurate detection schemes for determining true idle under DOS, Windows, and OS/2
- ❒ Accounts for operating system inactivity and power demands
- ❒ Accounts for application inactivity and power demands
- ❒ Allows application programs, DOS, and BIOS to share power management features to ensure more efficient use of power
- ❒ Determines when power-saving features should be activated
- ❒ Operates transparent to the user (behind the scenes)

While you are running an APM aware application, APM will detect any system inactivity. If APM detects that either the operating system or the application is waiting for input (or is in some other idle state), APM will reduce the CPU to minimum speed.

Once high speed is required again, APM will increase the CPU to maximum speed. With APM constantly monitoring all system activity, accounting for the TREK 2's power consumption, and controlling all power-saving features, you will realize significant additional power savings.

If power management is disabled in the BIOS Setup program, APM will also be disabled regardless of its settings. Once you have enabled the APM interface, some settings made in the BIOS Setup program may be overridden by APM.

# 5. Connecting Peripheral Devices

To expand your computing capabilities, you can add a variety of external devices to your computer. You may, for example, want to add a mouse, modem, or a printer. The computer is equipped with several interface ports, including an enhanced parallel (printer) port, a serial port, and two USB ports. These are provided as a means of connecting peripheral devices to the computer.

Connect peripheral devices to the computer's interface ports as described below.

## External keyboard/numeric keypad

You can use your TREK 2 computer with an optional external keyboard, numeric keypad, or IBM PS/2 compatible mouse. The devices are "hot pluggable." You do not have to power down the TREK 2 to connect these devices.
To connect an external keyboard to your computer:

1. Place the keyboard at the front of the computer or in another location appropriate for typing.
2. Plug the keyboard cable connector into the PS/2 keyboard socket on the left side of the computer.
3. Adjust the legs on the underside of the keyboard for a comfortable typing angle.

**Note:**
*If you wish to run a PS/2 keyboard and mouse at the same time, please contact Micron for a splitter cable.*

To connect a PS/2 compatible mouse to your computer:

1. Plug the PS/2 mini-din connector into the keyboard/ mouse socket on the left of the computer.
2. The mouse works immediately after being plugged in. Additionally it can be used with the internal touch pad.

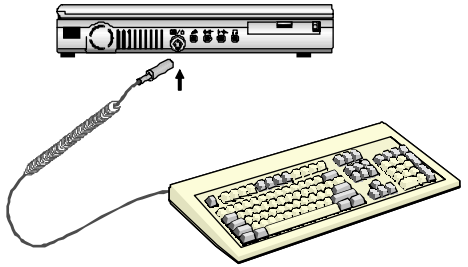


Figure 5-1: Connecting an external keyboard

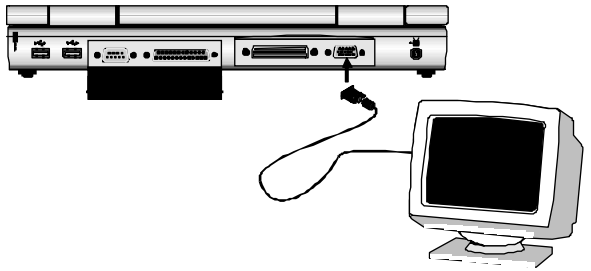


Figure 5-2: Connecting an external monitor

1. Plug the monitor's power cable into a wall outlet.
2. Before you turn on the monitor, turn on your computer and use the System Setup to designate the screen(s) that you want to use.
3. Turn on the monitor and adjust the monitor stand so that you have a good viewing angle of the screen.

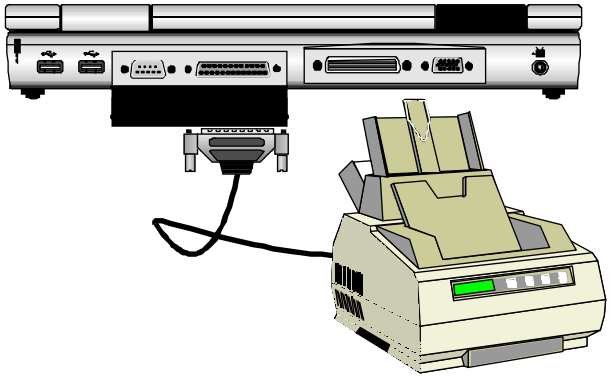


Figure 5-3: Connecting a printer

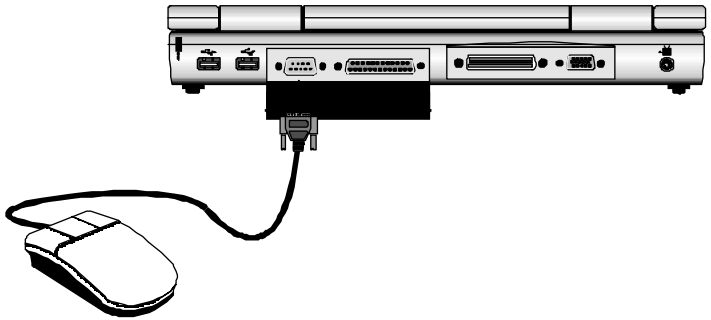
## Serial Devices

The rear panel of the TREK 2 computer has a standard RS-232C serial interface port. Use the serial port to connect a peripheral device that can both input data to the computer and receive data from the computer. Serial ports are widely used on everything from mainframe computers to display terminals and modems.

The serial port on the rear panel is designated COMA. The COM port designation is a conventional way to tell your software which I/O (input/output) address to use in order to send and receive data. These I/O addresses are defined by IBM in their Technical Reference manuals, and are understood by all popular software manufacturers. Refer to Figure 5-4 for information on connecting a serial device.

After you connect a peripheral device to the serial port, secure the two small screws on the connector.

Figure 5-4: Connecting a serial device



**Note:**

*You cannot use the touch pad and a serial mouse at the same time. In order to use a serial mouse, first disable the touch pad, then enable and configure the mouse as specified by the manufacturer.*

## Audio sources and output devices

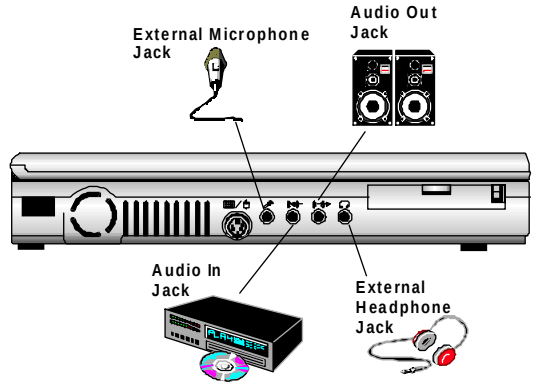
The built-in audio features of your TREK 2 let you record and play back sound from a variety of sources. These features include:

- PCI stereo sound that supports Microsoft Windows, Microsoft Sound System, and most programs that use the SoundBlaster Pro standard.
- The ability to perform real-time recording with compression and decompression.
- Scalable sampling rate (from 4 to 48KHz) and compression ratios that give complete control of record time to required storage ratio.
- 3-D positional audio DirectX™ 5.0
- Digitally controlled volume with muting.
- Auxiliary line-in and speaker line-out for maximum flexibility.
- Built-in microphone and speaker to enhance portability.

To adjust the volume of your internal speakers or speakers attached to the stereo speaker port, use the volume controls found in your application or in the Windows Volume Control accessory.

Your computer comes with several software utilities and programs already installed. Among these is a group of programs which let you control the computer's various audio capabilities.

Figure 5-5: Connecting Audio Devices




## Port replicator

You may optionally purchase a port replicator for your TREK 2 computer. Rather than having to detach all your devices every time you take your TREK 2 computer with you, and then reattach them when you come back, all the devices connect to the port replicator, which you then connect to your computer through a single port. Call Micron for more information about the optional port replicator.

## USB device

You may optionally purchase a USB (Universal Serial Bus) for your TREK 2 computer. USB devices such as mice, keyboards, and monitors are becoming more widespread throughout the computer industry.

The USB bus has a total bandwidth of 1.5MB per second. Up to 127 devices can be attached in a daisy chain fashion. For example, a USB keyboard or monitor could host several ports for additional devices. It is expected to be used for devices such as the mouse, keyboard, printer and scanner. Refer to Figure 5-6 for information on connecting a USB device.

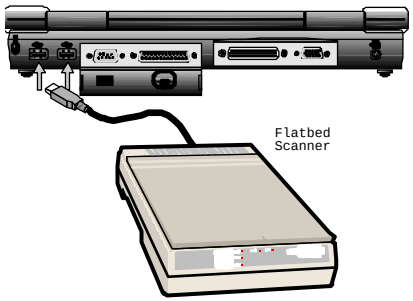



Figure 5-6: Connecting a Universal Serial Bus (USB) device

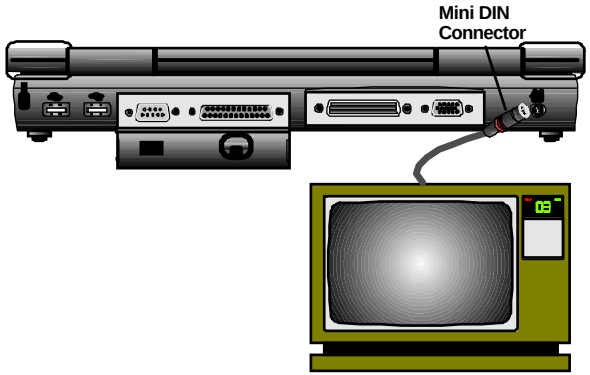



Figure 5-7: Connecting a TV monitor

## TV Out

You can connect a TV monitor to the TREK 2's S-Video port and view the TREK 2's video output. Refer to Figure 5-7.

The TV Out port accommodates a Mini DIN type connector.

## Installing optional devices

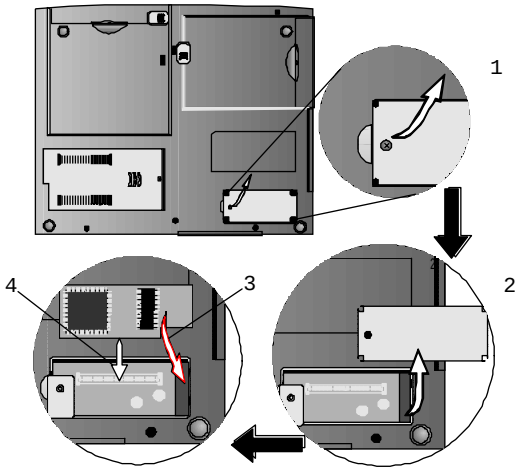
Located on the bottom of your TREK 2 you will find an expansion card bay. This bay is for future expansion.

- ❒ MPEG2 video decompression module
- ❒ 56K fax/modem module

Refer to the following illustration and instructions when installing one of the above expansion cards:

1. Remove the Phillips screw from the expansion bay cover (1) and lift the cover free (2).
2. Position the expansion card so the expansion card connector is facing down.
3. Insert the expansion card under the TREK 2 casing (3) and then push down on the card so its connector mates with the mainboard connector (4).
4. Replace the expansion bay cover and secure it with the screw you removed at Step 1.

Figure 5-8: Installing optional devices



# 6. Optional fax/modem

This 56K/33.6Kbps FAX/DATA modem connects your computer to all popular high-speed modems available today. Your new modem is compatible with systems for simplified installation and configuration. This section describes the hardware installation procedures for your new modem. Additional information on AT commands and S-registers is provided so that your system can be customized for your particular operating environment.

## Installation

This section will provide step by step instructions on how to install your new 56K/33.6Kbps modem. Installation of this modem is a three-step process consists of 1) hardware installation, 2) plug and play configuration, and 3) communication software installation and configuration.

## Hardware Installation

Installation is a two step process consisting of hardware installation and software installation.

## Unpacking your LT modem card

Before you begin your installation, be certain that you have all the following items listed below. Your package consists of the following items.

- ❒ LT modem module
- ❒ Drivers on MCRC

We recommend that you save all packaging in the event that you ever need to ship your LT Modem card for service.

## Software Installation

## Installing Driver for Windows 95/98

If ordered with your TREK 2, Micron has already installed all necessary software for your modem to be recognized by your operating system.

To install the Modem driver, please follow these steps:

1. During the Windows 95/98 boot procedures, a "New Hardware Found" display window is detected and shown on your window screen. Skip and ignore this message.
2. Insert the Driver CD into the CD-ROM drive, select the "Modem" directory and double click the "Setup" icon to begin with the installation.
3. Follow the on-screen procedures to finish the installation. Restart the computer.
4. Locate the driver entry by clicking the "Start" button then click the "Settings" . Click the "Control Panel" item; click the "System" icon.
5. From the "System Properties" window screen, click on the "Device Manager" tab.
6. Select "Modem" and check on the "LT Modem" entry.
7. You have now successfully installed the modem.

## Feature

| | |
|---|---|
| Communication Std. | V.90 (56K model) for highest Internet connection rate<br>V.34+, V.34, V.32bis, V.32, V.29, V.27ter, V.22bis, V.23, V.22, V.17, Bell212/103 |
| Data Compression: | V.42bis/M N P5 |
| Fax Group: | Group III Send/Receive Standard |
| Fax Command Set: | EIA/TIA - 578 Service Class 1 |
| Error Correction: | V.42/M N P2-4 |
| Host Interface: | 100 - pin connector 32 bit PCI bus |
| PnP Revision 1.0a | |
| Transmit level: | -9dBm |
| Receiver sensitivity: | 36dBm (V.34+); -40dBm (all other protocols) |
| DTE Speeds: | 300-115200 bps |
| Temperature: | 0-55 degrees C (operating); -20 to 80 degrees C (non-operating) |

## AT Command Set

## Executing Commands

Commands are accepted by the modem while it is in Command Mode. Your modem is in Command Mode by default, until you dial a number and establish a connection. Commands may be sent to your modem from a PC running communication software or any other terminal devices.

Your modem is capable of data communication at rates of: 300, 1200, 2400, 4800, 9600, 14400, 19200, 28800, 38400, 57600, and 115200, 230400bps. Make sure your Com port baud rate settings in your communications software is set to one of the above speeds.

All commands sent to the modem must being with AT and end with ENTER. All commands may be typed in either upper or lower case, but not mixed.

To make the command line more readable, spaces may be inserted between commands. If you omit a parameter from a command, which requires one, the default of will be assigned.

Example:

**ATH[ENTER]**

This command causes your modem to hang up.

## Basic AT Commands

.

| Command | | Function |
|---|---|---|
| A | | Manually answer incoming call. |
| A/ | | Repeat last command executed. Do not precede A/ with AT or follow with ENTER. |
| B_ | B0 | CCITT mode (V.22) |
| | B1 | Bell mode (Bell 212A) |
| D_ | | 0 - 9, A-D, # and * |
| | L | Last number redial |
| | P | Pulse dialing<br>Note: Pulse dialling is not supported for U.K.,Netherlands, Sweden, Norway, Denmark, Finland, Switzerland, Germany. |
| | T | Touch-tone dialing |
| | W | Wait for second dial tone |
| | , | Pause |
| | @ | Wait for five seconds of silence |
| | ! | Flash |
| | ; | Return to Command Mode after dialing |
| | $ | Bong tone detection (for calling card use) |

| | | |
|---|---|---|
| DS=n (n=0-3) | | Dial one of the four telephone numbers stored in the modem non-volatile memory. |
| E_ | E0 | Commands are not echoed |
| | E1 | Comamnds are echoed |
| +++ | | Escape Characters - Switch from Data Mode to Command Mode |
| H_ | H0 | Force modem on-hook (hang up) |
| | H1 | Force modem off-hook (make busy) Note: H1 command is not supported for ITALY |
| I_ | I0 | Firmware ID same as 13 |
| | I1 | Factory ROM checksum test |
| | I2 | Internal memory test |
| | I3 | Firmware ID |
| | I4 | Reserved ID |
| L_ | L0 | Low speaker volume |
| | L1 | Low speaker volume |
| | L2 | Medium speaker volume |
| | L3 | High speaker volume |
| M_ | M0 | Internal speaker off |
| | M1 | Internal speaker on until carrier detected |
| | M2 | Internal speaker always on |
| | M3 | Internal speaker on until carrier detected and off while dialing |
| N_ | N0 | Disable Autoscan mode |
| | N1 | Enable Autoscan mode |
| O_ | O0 | Return to Data Mode |
| | O1 | Return to Data Mode and initiate an equalizer |
| P | | Set Pulse dial as default Note: Pusle dialing is not supported for UK, Netherlands, Sweden, Norway, Denmark, Finland, Switzerland, Germany. |
| Q_ | Q0 | Modem sends responses |
| | Q1 | Modem does not send responses |
| Sr? | | Read and display alue in register r. |
| Sr=n | | Set register r to alue n (n = 0-255). |
| T | | Set Tone Dial as default |
| V_ | V0 | Numeric responses |
| | V1 | Word responses |
| W_ | W0 | Report DTE speed only |
| | W1 | Report line speed, error correction protocol, and DTE speed. |
| | W2 | Report DCE speed only |
| X_ | X0 | Hayes Smartmodem 300 compatible responses/blind dialing |
| | X1 | Same as X0 plus all CONNECT responses/blind dialing |
| | X2 | Same as X1 plus dial tone detection |
| | X3 | Same as X1 plus busy detection/blind dialing |
| | X4 | All responses and dial tone and busy signal detection |
| Y_ | Y0 | Modem does not send or respond to break signals |
| Z_ | Z0 | Reset and retrieve active profile 0 |
| &C_ | &C0 | Force Carrier Detect Signal High (ON) |
| | &C1 | Turn on CD when remote carrier is present |

| | | |
|---|---|---|
| &D_ | &D0 | Modem ignore the DTR signal |
| | &D1 | Modem return to Command Mode after DTR toggle |
| | &D2 | Modem hang up, returns to the Command Mode after DTR toggle |
| | &D3 | Reset modem after DTR toggle |
| &F_ | &F | Recall factory default configuration |
| &G_ | &G0 | Guard tone disabled |
| | &G1 | 550Hz guard tone |
| | &G2 | 1800 Hz guard tone |
| &K_ | &K0 | Disable flow control |
| | &K3 | Enable RTS/CTS hardware flow control |
| | &K4 | Enable XON/XOFF software flow control |
| &M_ | &M0 | Asynchronous operation |
| &S_ | &S0 | Force DSR Signal High (ON) |
| | &S1 | DSR off in command mode, on in on-line mode |
| &T_ | &T0 | End test in progress |
| | &T1 | Perform Local Analog Loopback Test |
| | &T3 | Perform Local Digital Loopback Test |
| &V | &V | Display Active and Stored Profiles |
| &W | &W0 | Store the active profile as Profile 0 |
| &Y_ | &Y0 | Configuration Profile 0 active upon Power on or reset |
| &Zn=x | N=0-3 | Store phone number x into non-volatile RAM |

## 6.3 MNP/V.42/V.42bis Commands

| | | |
|---|---|---|
| %C | %C0 | Disable MNP Class 5 and V.42bis data compression |
| | %C1 | Enable MNP Class 5 and V.42bis data compression only |
| &Q | &Q0 | Direct data link only (same as \N0) |
| | &Q5 | Same as \N3 |
| | &Q6 | Same as \N0 |
| \N_ | \N0 | Normal data-link only |
| | \N1 | Direct data-link only |
| | \N2 | V.42 or MNP data link only |
| | \N3 | V.42/MNP/Normal data link |
| | \N4 | V.42 data link only |
| | \N5 | MNP data link only |

## 6.5 Fax Class 1 Commands

| | |
|---|---|
| +FCLASS=n | Service Class |
| +FRH=n | Receive data with HDLC framing |
| +FRM=n | Receive data |
| +FRS=n | Receive silence |
| +FTH=n | Transmit data with HDLC framing |
| +FTM=n | Transmit data |
| +FTS=n | Transmit silence |

## Section 7 - S Registers

Your modem has 20 registers, designated S0 through S108. Table 7-1 shows the S-Registers, their functions, and their default values. Some registers can have their values changed by commands. If you use a command to change a register value, the command remains in effect until you turn off or reset your modem. Your modem then reverts to the operating characteristics specified in its non-volatile memory. Refer to Section 3 for information on how to use the AT commands to manipulate the S registers.

Table 7-1 S-Registers

| Register | Function | Country | Range/units | Default |
|---|---|---|---|---|
| S0 | Auto-answer Ring | Others | 0-255 /rings | 0 |
| | Germany | 0.1 /rings | | 0 |
| | | France | 0.2 /rings | 0 |
| | | Switzerland | 0-11 /rings | 0 |
| | | Italy | 0-4 /rings | 0 |
| S1 | Ring counter | | 0-255 /rings | 0 |
| S2 | Escape code character | | 0-127 /ASCII | 43 |
| S3 | Carriage return character | | 0-127 /ASCII | 13 |
| S4 | Line feed character | | 0-127 /ASCII | 10 |
| S5 | Backspace character | | 0-32, 127 /ASCII | 8 |
| S6 | Dial tone wait time | Others | 4, 5 /seconds | 4 |
| | Netherlands | | | |
| S7 | Remote carrier wait time | | 30-60/seconds | 45 |
| S8 | Comma pause time | | 0-255 /second | 2 |
| S10 | Carrier loss time | | 1-255 /0.1 second | 14 |
| S11 | Touch-tone dialing speed | | 90/milliseconds | 90 |
| S12 | Escape character guard | | 0-255/0.02 second | 50 |
| S28 | V.34 Modulation | | 0-255 | 1 |
| | Enable/Disable | | | |
| S30 | Disconnect timer | | 0-255 seconds | 0 |
| S36 | LAPM failure options | | Bit-mapped register | 7 |
| S37 | Connection speed | | Bit-mapped register | 0 |
| | (See Speed Table) | | | |
| S38 | 56K Dial Line Rate | | | |
| | (See Speed Table) | | | |
| S42 | 56K Auto Rate | | | |
| | Disable/Enable | | | |
| | (by Setting S38) | | | |
| S48 | V.42 negotiation options | | 0, 7, or 128 | 7 |
| S108 | 56K Digital loss Selection | | 0,1,2,3,6,7, | 6 |
| | (Selects the digitalloss | | | |
| | if using the modem | | | |
| | thru a PBX line.) | | | |

## Speed Table (unit: bits/s)

| Register | S37 | S38 |
|---|---|---|
| =0 | Maximum speed | 56K disable |
| =1 | reserved | 56K enable |
| =2 | 1200/75 | 32000 |
| =3 | 300 | 34000 |
| =4 | reserved | 36000 |
| =5 | 1200 | 38000 |
| =6 | 2400 | 40000 |
| =7 | 4800 | 42000 |
| =8 | 7200 | 44000 |
| =9 | 9600 | 46000 |
| =10 | 12000 | 48000 |
| =11 | 14400 | 50000 |
| =12 | 16800 | 52000 |
| =13 | 19200 | 54000 |
| =14 | 21600 | 56000 |
| =15 | 24000 | |
| =16 | 26400 | |
| =17 | 28800 | |
| =18 | 31200 | |
| =19 | 33600 | |

# Section 8 - Result Codes

| Result Code | Numeric | Result Code | Numeric |
|---|---|---|---|
| OK | 0 | Connect | 1 |
| RING | 2 | NO CARRIER | 3 |
| ERROR | 4 | CONNECT 1200 EC* | 5 |
| NO DIALTONE | 6 | BUSY | 7 |
| NO ANSWER | 8 | | |
| CONNECT 2400 EC* | 10 | CONNECT 4800 EC* | 11 |
| CONNECT 9600 EC* | 12 | CONNECT 14400 EC* | 13 |
| CONNECT 19200 EC* | 14 | CONNECT 7200 EC* | 24 |
| CONNECT 12000 EC* | 25 | CONNECT 16800 EC* | 86 |
| CONNECT 300 EC* | 40 | CONNECT 21600 EC* | 55 |
| CONNECT 24000 EC* | 56 | CONNECT 26400 EC* | 57 |
| CONENCT 28800 EC* | 58 | CONNECT 31200 EC* | 59 |
| CONNECT 33600 EC* | 60 | CONNECT 32000 EC* | 70 |
| CONNECT 34000 EC* | 71 | CONNECT 36000 EC* | 72 |
| CONNECT 38000 EC* | 73 | CONNECT 40000 EC* | 74 |
| CONNECT 42000 EC* | 75 | CONNECT 44000 EC* | 76 |
| CONNECT 46000 EC* | 77 | CONNECT 48000 EC* | 78 |
| CONNECT 50000 EC* | 79 | CONNECT 52000 EC* | 80 |
| CONNECT 54000 EC* | 81 | CONNECT 56000 EC* | 82 |
| CONNECT 58000 EC* | 90 | CONNECT 60000 EC* | 84 |
| DELAYED | 88 | BLACKLISTED | 89 |
| BLACKLIST FULL | 90 | | |

EC* only appears when the exteded result codes configuration option is enabled. EC is required by one of the following symbols, depending upon the error control method used:

V42bis-V.42 error control andV.42bis data compression.
V42-V.42 error control only.
MNP 5-MNP class 4 error control and MNP class 5 data compression
MNP 4-MNP class four error contol only.
NoEC-No error control protocol.

## Troubleshooting

This section describes some of the common problems you may encounter while using your modem. If you can not resolve your difficulty after reading this chapter, contact your dealer or vendor for assistance.

### Modem does not respond to commands

1 Make sure the modem is not configured with a conflicting COM port and IRQ setting. Your modem can not be configured as COM1 if another device in your system is also configured as COM1. Similarly, IRQ settings may not overlap.

2 Make sure the communication software is configured to “talk” to the modem on the correct COM port and IRQ setting (same COM port and IRQ setting as the modem).

3 Your communication software msut know which address your modem is using in the system in order to pass data to it. Similarly, IRQ settings must be set correctly to receive data from, the modem.

4 Make sure that your modem is initialized correctly. Your modem may have been initialized to not display responses. You may factoryu-reset the modem by issuing AT&F and press ENTER. The factory default allows the modem to display responses after a command has been executed.

5 Make sure the baud reate setting in your software is set t0 115200,57600,38400, 19200,14400,9600, 2400, 1200 or 300 bps. An incorrect baud rate prevents the modem from operating properly.

### Modem does not dial

1 Make sure the modem is connected to a working phone line. Replace the modem with a working phone to ensure that the phone line is working.

2 Make sure the phone line is connected to the jack marked LINE. Incorrect connection prevents the modem from operating properly.

### Modem dials but does not connect

1 Make sure the IRQ setting is identical on both the modem and the software. Modem and software must be configured identically.

2 Make sure the phone line is working properly. Replace the modem with a regular phone and dial the number. If the line sounds noisy, you may have difficulty connecting to the remote device.

### Modem makes a connection but no data appears on your screen

1 Make sure the correct data format (data bits, stop bits, and parity bits) and flow control (RTS/CTS) are being used.

2 Make sure the correct terminal emulation mode is being used (see communication software manual).

3 High pitch tone is heard whenever you answer the phone

4 Make sure Auto-Answer is turned off. Your modem is factory configured to NOT auto-answer. Issue AT&F to factory reset your modem.

### Modem experiences errors while communicating with a remote modem

1 Make sure the remote system and your modem use the same communication parameters (speed, parity, etc.).

2 Make sure RTS/CTS hardware flow control is enabled and XON/XOFF software flow control is disabled in the communication software.

### Modem experiences bursts of errors or suddenly disconnects while communicating with a remote modem.

1 Make sure Call Waiting is turned off.

2 Make sure the phone line does not exhibit excess noise.

3 Make sure the data speed is not faster than your computer's capability. Most IBM compatibles are capable of 19,2000 bps under DOS and Windows. Operating at higher speeds under Windows requires a faster CPU (386/486 or better), a high performance replacement Windows 3.1x comm.drv or Windows 95.

## Service and support

In the unlikely event you experience difficulty in the use of this product, we suggest you consult the Troubleshooting section of this guide, and consult with your dealer. To obtain service for this product, follow Micron's Return Merchandise Authorization procedure.

# 7. Optional Port Replicator

The port replicator is designed to give your notebook computer the expandability and connectivity of a desktop computer, without sacrificing convenience.

In addition, the port replicator has an AC IN connector and a power switch. When the computer is connected to the port replicator, the port replicator controls power to the computer (the computer's power switch and DC IN connector will be covered).

This chapter provides a short introduction that will familiarize you with your new port replicator. It covers:

- ❒ Important information about unpacking and handling the product.
- ❒ A general overview of the system.

Figure 7-1: The unit and its accessories

If there are any missing or damaged items, contact your dealer immediately. Be sure to save the packing materials for future use in repacking and shipping.

## Operating Environment

To enhance its reliability, this product must be "operate as intended" in the face of typical environment conditions. Our major task is to prevent equipment damage and to minimize any malfunctions. (See Figure 7-2).

- ❒ Leave in a place where foreign matter or moisture may enter the system
- ❒ Subject to shock or vibration
- ❒ Exposed to excessive heat or direct sunlight
- ❒ Exposed to strong magnetic field

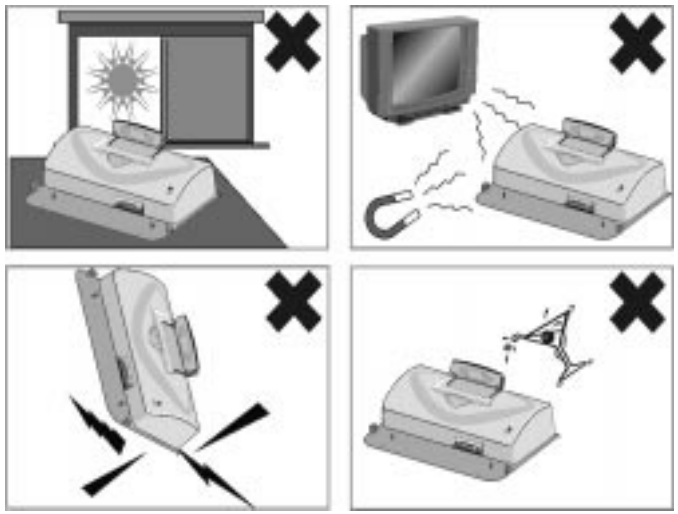


Figure 7-2: Operating environment

## Features

When the notebook computer is connected to the port replicator, the system has the following features:

- ❒ One Serial Port
- ❒ One Parallel Port
- ❒ One VGA Port
- ❒ One PS/2 Port
- ❒ Two USB Connectors
- ❒ One Game Port
- ❒ One DC-IN Connector
- ❒ Two PC card sockets
- ❒ One TV Out Connector
- ❒ One SIR (if equipped)

## Getting to know the port replicator

Before you connect your computer to the port replicator, take a few minutes to become familiar with the port replicator's features.

### Front Panel

The front panel of the port replicator is shown in figure 7-3 with its corresponding features described after the illustration.

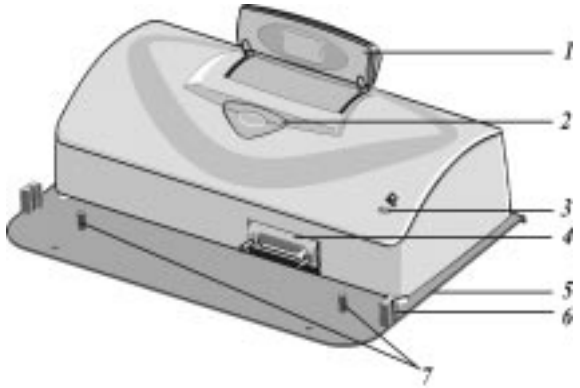



Figure 7-3: Front Panel

**1. Lever Arm**: Push this lever arm back and forth to connect or disconnect both the notebook computer and the port replicator.

**2. Eject Button:** Use this button to disconnect the internal components of the notebook computer from the port replicator.

**3. LED:** This LED will lit when the notebook computer is connected to the port replicator.

**4. Port replicator connector:** Connect the notebook computer's connector into this 204-pin connector.

**5. Unit base:** This base will serve as a support for the port replicator.

**6. Guiding edges:** These two edges will serve as an indication that the notebook computer is properly aligned to the port replicator.

**7. Guiding bars:** These two bars will serve as holder for the notebook computer thus tightening it up with the port replicator.

## Left Panel

If equipped, the left panel of the port replicator consistst of the SIR (Serial Infrared) communication module.

With this feature, you are able to perform wireless, serial communication.


Figure 7-4: Left Panel

## Rear Panel

The rear panel of the port replicator is shown in figure 7-5 with its corresponding features described after the illustration.

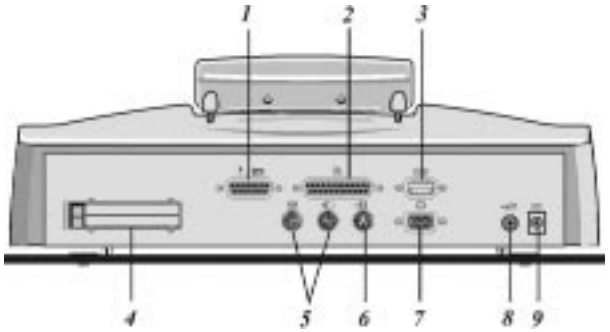



Figure 7-5: Rear Panel

**1. Game Port**: This 15-pin port allows you to connect a joystick, gamepad, or MIDI device.

**2. Parallel Port:** Plug a parallel printer into this 25-pin female where it replaces the notebook computer's printer port.

**3. Serial Port:** Plug a serial printer, mouse or other serial device into this 9-pin serial port.

**4. PCMCIA Socket:** These two sockets lets you extend the capabilities of PC cards (one PCMCIA type III or two PCMCIA type II card) or CardBus cards.

You can change the PC cards without having to reboot your computer.

When you are using both the port replicator and the notebook computer, you are able to insert different types of PC cards (such as PCMCIA, LAN, SCSI or Fax Modem card) into the four sockets at the same time.

Different types of card will operate at the same time performing each individual function. Please refer to this manual on how to insert a PC card.

**Note:**

*The PCMCIA sockets of the port replicator do not support ZV.*

**5. PS/2 Port:** This connector accepts an external keyboard with a 6-pin (PS/2-compatible) connector or an external IBM PS/2 compatible mouse. To connect a keyboard with a 5-pin connector, use a 5-pin to 6-pin transfer cable(available from your dealer).

**6. TV Out:** This 4-pin S-Video port allows you to view the port replicator's Video output on a television monitor.

**7. VGA:** This port allows you to easily connect an external VGA/SVGA display monitor using the 15-pin female connector.

**8. USB:** This port allows for Plug and Play connections of USB devices.

**9. DC-IN:** Plug the DC adapter into this connector.

## Operation

This section describes how to configure and use the port replicator with your notebook computer. It covers:

- ❒ Connecting your notebook computer to the port replicator
- ❒ Disconnecting your notebook computer from the port replicator

## Connecting the notebook computer

The notebook computer connects to the 204-pin connector on the front of the port replicator.

- ❒ Turn off the port replicator
- ❒ Turn off the notebook computer power
- ❒ Disconnect all peripheral accessories

1. Plug the DC adapter into the DC IN connector on the back of the port replicator.
2. Place the port replicator in a location that is convenient for using the computer.
3. From your notebook's rear panel, open the door at the left side and turn it downward.

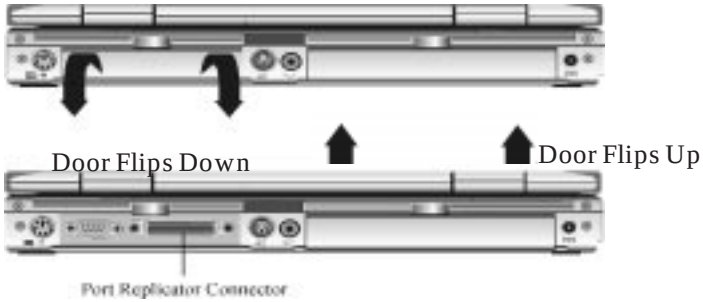



Figure 7-6: Notebook computer rear panel

4. Locate the two position guides (holes) at the bottom edge of the notebook computer and align it to the guiding bars on the front panel of the port replicator.
5. Once both of them are aligned properly, press the notebook computer downward to fuly attached it to the port replicator.
6. Be sure the notebook computer is properly aligned to the two L-shape guiding edges located on both sides of the port replicator.
7. Pull the lever arm forward (shown in Fig. 7-7) to plug the 204-pin port replicator connector on the rear panel of the computer into the computer connector on the front panel of the port replicator.

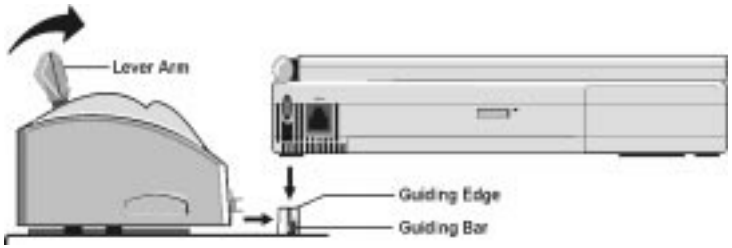



Figure 7-7: Connecting the computer to the port replicator

## Cold Dock (Power On)

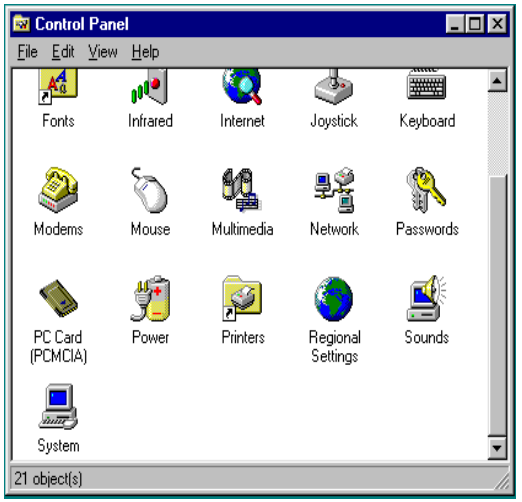
Press the Power/Suspend/Resume button to turn on the computer.

## Removing the PC Cards

In Windows 95 or 98, you are able to remove any other PC card or CardBus card and replace with another powering down the system. This method is called “Hot-Swapping PC Cards”. To do so, first shut down the device by choosing the PC Card icon in the Control Panel.

Note:

*You can use the DC adapter of the notebook computer or just use the battery pack to supply power during operation.*




The PC card (PCMCIA) Properties will be shown where it displays information about the PC Card slots and any currently inserted devices.

When both the PCMCIA slot of the notebook computer and port replicator are empty, the devices from the list on the Socket Status will be listed as “Empty”.

When any PC card or CardBus are inserted on both the PCMCIA slot of the notebook computer and port replicator, the name of the card that is currently inserted will be displayed on the Socket Status window.

To remove a PC Card device from the system, first select the device from the list on the Socket Status page and then choose “Stop”.

Windows 95 or 98 shuts down the device and temporarily disables its drivers. After Windows 95 disables the device, the socket is list as empty. You then can remove the PC Card device.

**Warning:**

*When the PC card is in operation, try not to press the eject button at the PCMCIA socket on the notebook computer or port replicator. This may cause a temporary hangup on the system.*

## Disconnecting the notebook computer

To remove the computer from the port replicator, push back the lever arm backward to release the notebook computer.

**Note:**

*Before doing this, be sure that the notebook and port replicator internal components are completely disconnected.*

To do this, you have two options to follow:

## By software application

Click on the “Start” button and select the “Eject PC” option to disconnect the two units. The notebook computer will enter the “Suspend Mode”; press the “Eject” button then push the “Lever Arm” backward to totally disconnect the two units or;


## By hardware application

### Procedure 1

You can also press the “Eject” button on the port replicator to enter the “Suspend Mode”. The “Suspend Status” indicator icon on the LED panel of the notebook computer will light to indicate its mode.

Press the “Eject” button for the second time to disconnect the internal components of the notebook computer from the port replicator; the LED on the port replicator will be shut off. Push the “Lever Arm” backward to totally disconnect the two units or;

### Procedure 2

Press the “Power” button to enter “Suspend Mode”; press the “Eject” button of the port replicator then push back the “Lever Arm” to totally disconnect the two units.

**Note:**

*The LED indicator on the front panel of the replicator shuts off automatically after you have successfully executed any of the above two procedures.*

**Warning:**

*Do not detach the notebook computer and port replicator by force or when the notebook computer is still running any applications.*
*Follow any of the above mentioned procedures on how to disconnect the notebook computer from the port replicator. Failure to do this will definitely cause a major hangup on the notebook computer as well as the port replicator.*

After the internal components are completely disconnected, you are now ready to separate the notebook computer and port replicator manually by following the steps below:

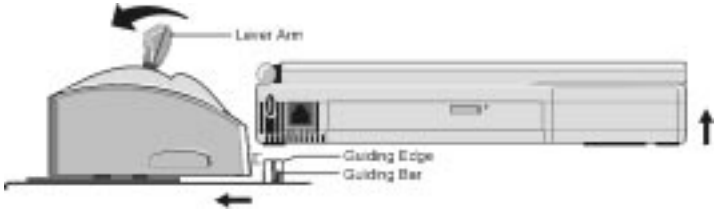



Figure 7-8: Disconnecting from the port replicator

1. Push the lever arm backward to completely separate the notebook computer and the port replicator.

2. Lift up the notebook computer away from the guiding bars of the port replicator.

# 8: Running BIOS Setup

## Introduction

The BIOS (Basic Input and Output System) Setup program is a menu driven utility that enables you to make changes to the system configuration and tailor your system to reflect installed hardware or alter system performance.

It is a ROM-based configuration utility that displays the system's configuration status and provides you with a tool to set system parameters. These parameters are stored in non-volatile battery backed-up CMOS RAM which retains this information even when the power is turned off.

When the TREK 2 is turned back on, the system is configured with the values stored in CMOS. With easy-to-use menus, you can configure such items as:

- ❒ Hard drives and peripherals
- ❒ Bootup drive sequence
- ❒ Password protection
- ❒ Power management features

The settings made in the BIOS Setup program intimately affect how the TREK 2 performs. It is important, therefore, to first try to understand all the Setup options, and second, to make settings appropriate for the way you use the TREK 2.

This chapter will guide you through the Setup program by providing clear explanations for all Setup options. A standard configuration has already been set in the Setup Program, so you will very likely have little to worry about for now. However, we recommend that you read this chapter just in case you need to make any changes in the future.

The next section discusses how to move around in the BIOS Setup program, as well as how to specify and save your new settings. A brief discussion of the optional settings among the different submenus follows.

## Navigating through BIOS setup

The Setup program has been designed to make it as easy to use as possible. It is a menu driven program, which means you can scroll through the various sub-menus and make your selections among the various predetermined choices. If you accidentally make a setting and don't know which one to switch back to, the Setup program has a hot key that allows you to return to the previous value. The hot keys are discussed in more detail later in this chapter.

You should run the Setup program under the following conditions:

- ❒ You have set up the computer for the first time and you get a message prompting you to run the BIOS Setup program
- ❒ You want to configure the TREK 2 to use a different booting device
- ❒ You want to reset the system clock
- ❒ You want to redefine the communication ports to prevent any conflicts
- ❒ You want to make changes to the power management configuration
- ❒ You want to change the password or make other changes to the security setup

**Note:**

*The above items are only a few examples and are by no means a complete list.*

## The legend bar

At the bottom of the Setup screen you will notice a legend bar. The keys in the legend bar allow you to navigate through the various setup menus. The following table lists the keys found in the legend bar with their corresponding alternates and functions.

## Accessing the BIOS setup program

To access the BIOS Setup program, press the F2 key after the TREK 2 has run through its POST.

## Item specific help

On the right side of the Setup screen is an area labeled Item Specific Help. This area will list navigation key shortcuts and information that is specific for the item that you are currently editing.

## The menu bar

The top of the screen has a menu bar with these suggestions:

Main: Make changes to the basic system configuration

Advanced: Use this menu to enable and make changes to the advanced features available on your system, such as enabling FIR.

Security: Use this menu to set a password. The password allows bootup and controls access to the BIOS setup

Power: Use this menu to configure and enable Power Management features.

Boot: Use this menu to configure the default system device used to locate and load the Operating System

To access the menu bar items, press the right or left arrow key until the desired item is highlighted.

## Launching submenus

Note that a right pointer symbol appears to the left of certain fields. This pointer indicates that a submenu can be launched from this field. A submenu contains additional options for a field parameter. To call up a submenu, simply move the cursor to highlight the field and press the [Enter] key.

The submenu will immediately appear. Use the legend keys to enter values and move from field to field within a submenu just as you would within a menu. Use the [Esc] key to return to the main menu.

Take some time to familiarize yourself with each of the legend keys and their corresponding functions.

If you accidentally make unwanted changes to any of the fields, use the “Set Default” hot key [F9]. While moving around through the Setup program, note that explanations appear in the Item Specific Help window located to the right of each menu. This window displays the help text for the currently highlighted field.

## General help

In addition to the Item Specific Help window, the BIOS Setup program also provides a General Help screen. This screen can be called up from any menu by pressing [F1] or the [Alt] + [H] combination. The General Help screen lists the legend keys with their corresponding alternates and functions.

When a scroll bar appears to the right of a help window, this indicates more information to be displayed that won’t fit in the window. Use the [PgUp] and [PgDn] keys or the up and down arrow keys to scroll through the entire help document.

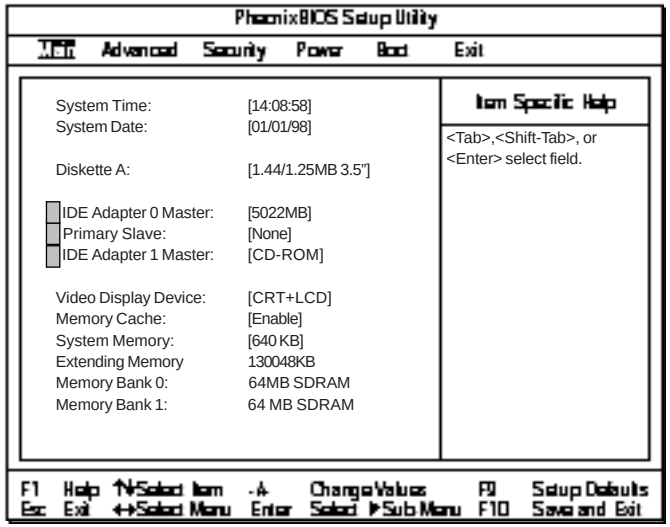
Press the Home key to display the first page, press End to go to the last page. To exit the help window, press the [Enter] or the [Esc] key.

## Save changes and exit Setup program

Refer to the exit menu section of this chapter for detailed information on saving changes and exiting the setup program.

## Main menu

When the Setup program is accessed, the main menu appears.




Changes to the TREK 2's basic system configuration can be made from this menu. Each of the fields displayed in this menu are covered below in detail.

## System time

Sets your system to the time that you specify (usually the current time). The format is hour, minute, second. Insert the appropriate information. Use the [Tab] or [Shift] + [Tab] keys to move between the hour, minute, and second fields.

## System date

Sets your system to the date that you specify (usually the current date). The format is month, day, year. Type in the appropriate information. Use the [Tab] or [Shift] + [Tab] keys to move between the month, day, and year fields.

## Diskette A

Specifies a drive type for diskette drive A. Drive A is the factory-included floppy disk drive. Valid configurations are:

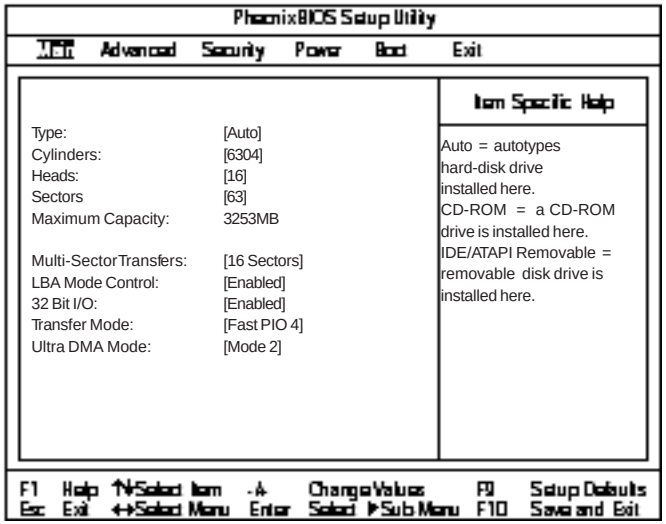
- ❒ Disabled
- ❒ 1.44/1.25 MB 3½" (default value)

## IDE adapter 0 master

This field is used to configure the IDE Hard Disk installed in the system. To configure a hard disk drive, move the cursor to highlight the IDE Adapter 0 Master field:

IDE Adapter 0 Master [XXXX MB]

Pressing the [Enter] key at this point will reveal the IDE Adapter 0 Master submenu:




**Note:**

*Before configuring a hard disk drive, have the configuration information supplied by the hard drive's manufacturer. Incorrect settings can keep your system from recognizing the hard disk.*

## Type

The following options are available for this field:

- ❒ Auto (default value)
- ❒ None
- ❒ CD-ROM
- ❒ User
- ❒ IDE Removable
- ❒ ATAPI Removable

Select *Auto* to automatically configure an IDE type drive. This option only works with standard IDE drives. If your drive is an IDE type, it will be automatically recognized and properly configured. If automatic detection is successful, the correct values will be filled in for the remaining fields on this submenu.

If no drive is installed or if you are removing a drive and not replacing it, select None. Select CD-ROM if a CD-ROM is installed as the IDE Adapter 0 Master.

To configure a drive that is not an IDE type drive, select User. Manually enter the number of cylinders, heads and sectors per track for your drive. Refer to your drive's documentation or look on the drive if you need to obtain this information.

Select ATAPI Removable if the drive is an ATAPI type drive that supports high-capacity storage diskettes that are compatible with 1.44MB diskettes. This option would be used in the event that you have swapped the FDD for an ATAPI type removable drive (for example, an LS 120 drive).

## Cylinders

This field configures the drive's number of cylinders. Refer to your drive's documentation or look on the drive to determine the correct value to enter for this field. If the system has successfully detected the drive automatically, there is no need to adjust this field. To make changes to this field, the type field must be set to User.

## Heads

This field configures the drive's number of read/write heads. Refer to your drive's documentation or look on the drive to determine the correct value to enter for this field. If the system has successfully detected the drive automatically, there is no need to adjust this field. To make changes to this field, the type field must be set to User.

## Sectors

This field configures the drive's number of sectors per track. Refer to your drive's documentation or look on the drive to determine the correct value to enter for this field. If the system has successfully detected the drive automatically, there is no need to adjust this field. In order to make changes to this field, the type field must be set to User.

## Maximum capacity

This field gives the maximum formatted capacity of the hard disk drive. This is a display only field.

## Multi-sector transfers

This option sets the number of sectors per block to the highest number supported by the drive. This field can also be set manually. Note that when this field is automatically configured, the set value may not be the fastest value for the drive. Refer to the hard drive documentation to determine the optimal value and set it manually. To make changes to this field, the type field must be set to User.

Configuration options are:

- ❒ Disabled
- ❒ 2 Sectors
- ❒ 4 Sectors
- ❒ 8 Sectors
- ❒ 16 Sectors (default value)

## LBA (Logical Block Access) mode control

When enabled, this option uses 28-bit addressing of the hard drive without regard for cylinders, heads, and sectors. Note that Logical Block Access may decrease the access speed of the hard disk. However, LBA Mode is necessary to use drives with greater than 528MB in storage capacity. In order to make changes to this field, the Type field must be set to *User*.

Configuration options are:

- ❒ Disabled
- ❒ Enabled (default value)

## 32-bit I/O

When enabled, this option speeds up communication between the CPU and the IDE controller. This option supports PCI local bus only. ISA bus is not supported. In order to make changes to this field, the Type field must be set to *User*.

Configuration options are:

- ❒ Disabled
- ❒ Enabled (default value)

## Transfer mode

When enabled, this option speeds up communication between the system and the IDE controller by using enhanced I/O transfer modes (PIO Modes). In order to make changes to this field, the Type field must be set to User.

Configuration options are:

- ❒ Standard
- ❒ Fast PIO 1
- ❒ Fast PIO 2
- ❒ Fast PIO 3
- ❒ Fast PIO 4 (default value)

## Ultra DMA mode

When enabled, this option speeds up data transfer to and from the drive. In order to make changes to this field, the Type field must be set to User. Set the Type field to Auto to provide the optimum transfer mode.

Configuration options are:

- ❒ Disabled (default value)
- ❒ Mode 0
- ❒ Mode 1
- ❒ Mode 2

After using the legend keys to make changes to this submenu, press the [Esc] key to exit back to the Main menu.

## Primary slave

The number value in this field indicates the size of your TREK 2's Primary Slave Hard Drive. The arrow head icon indicates that this field contains a submenu. The submenu is used to configure an IDE Hard Disk installed in the system.

To configure a hard disk drive, move the cursor to highlight the Primary Slave field, and press the [Enter] key. The Primary Slave submenu screen will appear. When a Slave HDD is installed, the fields and options on this submenu will be the same as the IDE Adapter 0 Master submenu described above.

After using the legend keys to make changes to this submenu, press the [Esc] key to exit back to the Main menu.

## IDE Adapter 1 Master

The value in this field indicates the size of your TREK 2's IDE Adapter 1 Master Hard Drive or the presence of a CD-ROM or DVD drive.

The submenu is used to configure an IDE Hard Disk or CD-ROM/DVD installed in the system.

To configure a hard disk drive or CD-ROM/DVD, move the cursor to highlight the IDE Adapter 1 Master field, and press the [Enter] key. The IDE Adapter 1 Master submenu screen will appear. When the Type field is set to “Auto” or “CD-ROM”, only the 32 Bit I/O and Ultra DMA Mode fields are available. When set to “User” the fields and options on this submenu are the same as the IDE Adapter 0 Master submenu described above.

After using the legend keys to make your selections to this submenu, press the [Esc] key to exit back to the Main menu.

### Video display device

Allows you to choose the display mode. Setting this field to Simul Mode allows you to view the video output on the TREK 2 LCD panel and an external CRT.

Configuration options are:

- ❒ LCD only
- ❒ CRT only
- ❒ CRT+LCD (default)

### Memory cache

Enables or disables the L2 memory cache. Enabling this will speed up TREK 2 operations.

Configuration options are:

- ❒ Enabled (default)
- ❒ Disabled

### System memory

This field displays the amount of conventional memory detected by the system during bootup. You do not need to make changes to this field. This is a display only field.

### Extended memory

This field displays the amount of extended memory detected by the system during boot-up. You do not need to make changes to this field. This is a display only field.

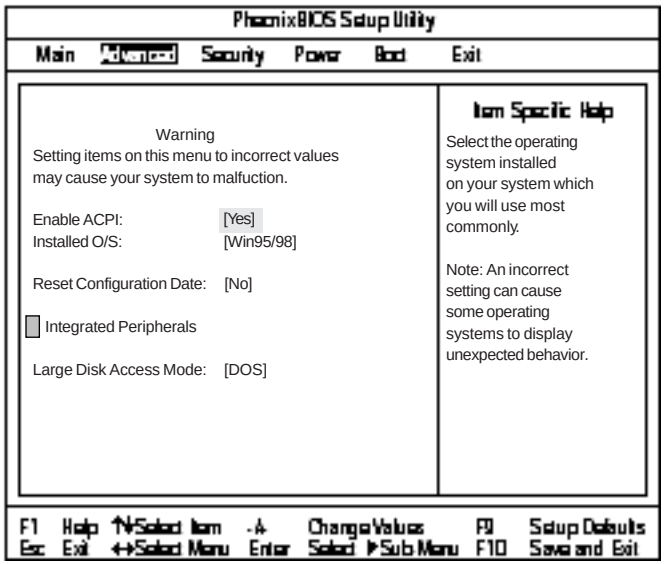
### Memory bank 0

This field displays the amount of memory installed in the Memory Bank 0 (even address). You do not need to make changes to this field. This is a display only field.

### Memory bank 1

This field displays the amount of memory installed in the Memory Bank 1 (odd address). You do not need to make changes to this field. This is a display only field.

### The advanced menu



Selecting Advanced from the menu bar displays the dvanced menu:

## Enable ACPI

This field enables the Advance Configuration and Power Interface (ACPI) BIOS. ACPI is a power management specification developed by Intel, Toshiba and Microsoft making hardware status information available to the operating system. ACPI enables a PC to turn its peripherals on and off for improved power management. The default setting is Yes.

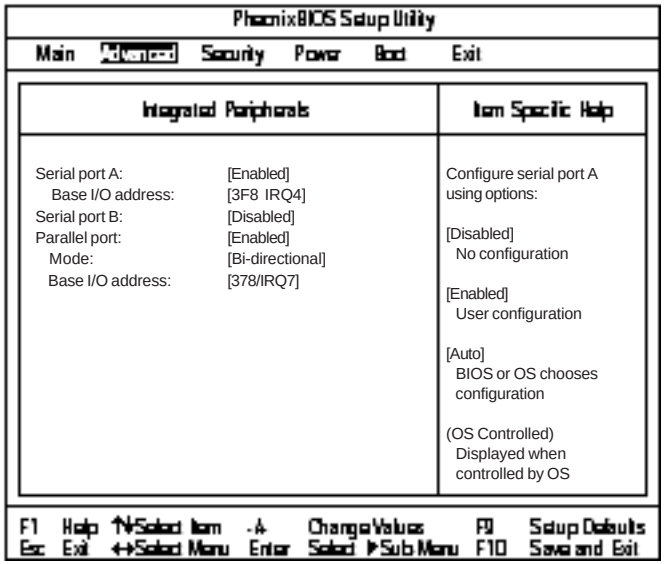
## Install O/S

This field allows you to enable the Plug and Play operating system to set up your hardware devices in Windows 95/98.

- ❒ Select Win95/98 if you are running Microsoft Windows 95 or Windows 98.
- ❒ Select WinNT 4.0 if you are running Microsoft Windows NT 4.0.
- ❒ Select other if you are running another operation system.

## Integrated peripherals

Pressing the [Enter] key when this field is highlighted calls up the following submenu:




This menu allow you to configure the TREK 2's serial and parallel ports. Each field on this submenu is covered below.

## Serial port A

This field allows you to configure the TREK 2's serial COM1 port. The following options are available.

- ❒ Auto
- ❒ Disabled
- ❒ Enabled (default value)

When enabled is selected, the base I/O address menu item appears.

## Base I/O address

When the Serial Port A field is set to Enabled, the “Base I/O Address” field becomes available and you can set the serial port’s IRQ and I/O address. The following options are available:

- ❒ 3F8, IRQ 4 (default value)
- ❒ 2F8, IRQ 3
- ❒ 3E8, IRQ 4
- ❒ 2E8, IRQ 3

## Serial port B

This field allows you to configure the TREK 2’s serial COM2 port. The following options are available:

- ❒ Auto
- ❒ Disabled
- ❒ Enabled (default value)

When Enabled is selected, the Base I/O Address menu item and Mode items appear.

## Parallel mode

This field allows you to configure the TREK 2’s parallel port transmission mode. The following options are available:

- ❒ Output only
- ❒ Bi-directional (default value)
- ❒ ECP
- ❒ EPP

Output only mode allows data output but no data input. However, EPP and ECP are Bi-directional modes, allowing both data input and output. The EPP and ECP modes are only supported with EPP and ECP aware peripherals.

With the ECP mode, the port is software and hardware compatible with existing parallel ports so that it may be used as a standard printer mode if ECP is not required.

ECP mode provides an automatic high burst-bandwidth channel that supports DMA for ECP in both the forward (host to peripheral) and reverse (peripheral to host) direction.

## Base I/O address

Use this option to choose the I/O (port) address for the Parallel port. The available options are:

- ❒ 378/IRQ7 (default)
- ❒ 278/IRQ7
- ❒ 3BC/IRQ7

This field is only available when the Parallel port is set to *Enabled*.

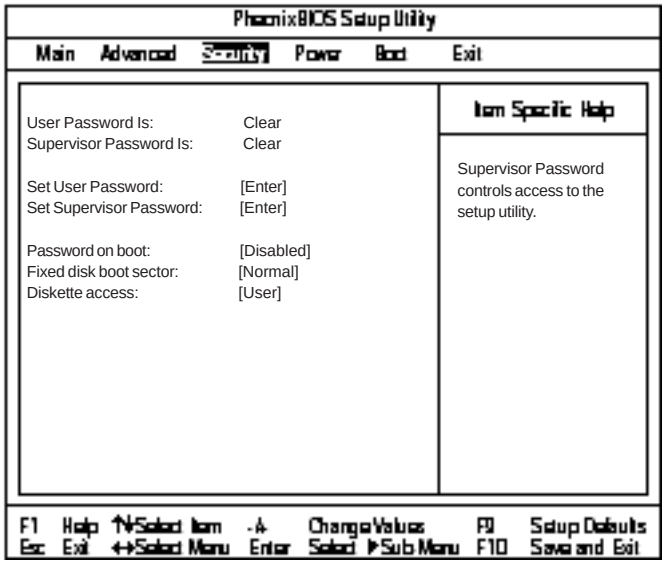
## Large Disk Access Mode

Specifies the type of operating system in use on the Notebook. Leave this setting at the default DOS unless you have another operating installed (such as UNIX or Novell Netware). Available configurations are:

- ❒ DOS (default value)
- ❒ Other

## The security menu

The TREK 2's advanced system of security allows you to set a password to prevent unauthorized access to system resources, data, and the BIOS Setup Program. This section covers each parameter of the Security Setup. Selecting *Security* from the menu bar displays the following menu:




## A note about passwords

The BIOS Setup program allows you to specify passwords in the Security menu. The passwords control access to the BIOS and certain Security menu options during system startup.

The passwords are not case sensitive. In other words, a password can be entered using either upper or lower case letters; it makes no difference. If you forget your password, your system will have to be sent to Micron to have it removed at your expense.

## User password is:

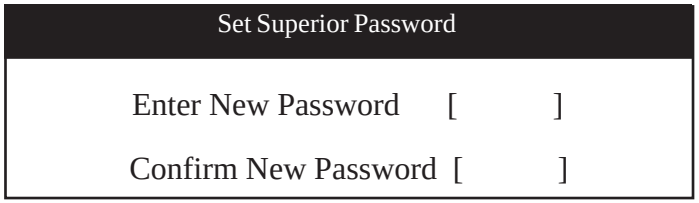
This field will show *Set* when you have set a User Password as described below. If you have not set the User Password, the field will show Clear. This is a display only field.

## Supervisor password is:

This field will show *Set* when you have set a Supervisor Password. If you have not set the Supervisor Password, the field will show *Clear*. This is a display only field.

## Set supervisor password

This field allows you to set the *Supervisor* password. To set the *Supervisor* password, highlight this field and press the [Enter] key. The following dialog box appears:




Type the password and press the [Enter] key. You can type up to seven alphanumeric characters. Symbols and other keys are ignored. To confirm the password, type the password again and press the [Enter] key. The *Supervisor* password is now set. This password allows full access to the BIOS Setup menus.

To clear a password, highlight this field and press the [Enter] key. The same dialog box as above will appear. Press the [Enter] key twice. The password is now cleared.

### Note

*Large Disk Access mode controls how the disk controller accesses the disk volume. Setting the option to Other may cause the hardware not to recognize DOS, Windows or other DOS based operating system disk formats.*

## Set user password

This field allows you to set the User password. To set the User password, follow the same instructions for setting the Supervisor password. The User password allows restricted access to the Setup menus. This password also requires that the Supervisor password be set prior to setting the User password.

## Password on boot

This option requires prior setting of the Supervisor password to function. When enabled, the system will then require either the Supervisor or User password before the system can bootup. The options for this field are:

- ❒ Disabled (default value)
- ❒ Enabled

## Fixed disk boot sector

This option requires prior setting of the Supervisor password to function. When set to Normal, the system will allow normal access to the HDD boot sector. When set to Write protect, the BIOS blocks all accesses to the boot sector. The options for this field are:

- ❒ Normal (default value)
- ❒ Write Protect

**Note:**

Write protecting the HDD boot sector will protect the HDD against boot sector viruses. However, this option may interfere with the normal operation of certain operating systems or anti-virus programs which would normally need access to the boot sector area.

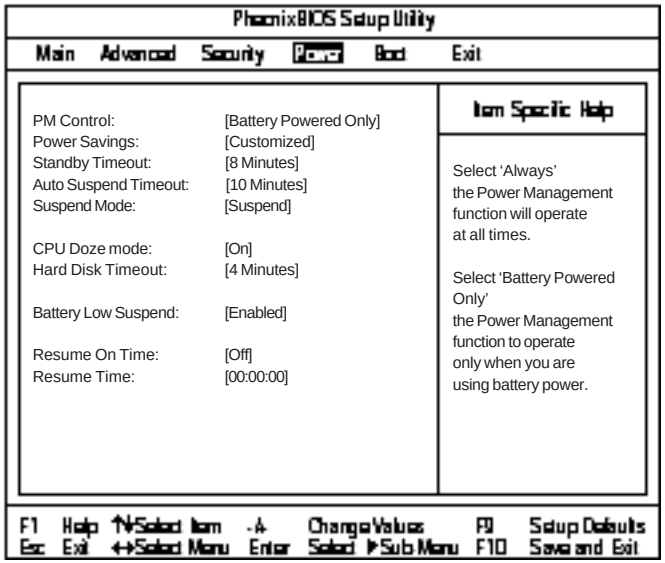
## Diskette access

This option requires prior setting of the *Supervisor* password to function. When set to User, the system will then require either the Supervisor or User password before allowing access to the Floppy Disk Drive (FDD). When set to Supervisor, only the Supervisor password will allow access to the FDD. The options for this field are:

- ❒ User
- ❒ Supervisor (default value)

## Power menu

The Power menu of the Setup program allows you to enable and adjust the TREK 2's advanced power saving features. Enabling these features will extend the life of the battery pack between charges. To make changes to power management settings, select Power from the menu bar. The following menu appears:



## PM control

This field allows you to choose the Power Management mode. You can set Power Management to operate at all times or only when you are using battery power. The options for this field are:

- ❒ Always
- ❒ Battery powered only (default value)

## Power savings

This option must be enabled to use any of the automatic power saving features. The options for this field are:

- ❒ Disabled
- ❒ Customized (default value)
- ❒ Maximum Power Savings
- ❒ Maximum Performance

If this menu item is set to disabled, power management features will not function regardless of other field settings on the power menu.

The customized option allows you to make your selections from the following fields within the power menu.

When set to maximum power savings, system power will be conserved to its greatest amount. The remaining fields within the power menu will be set to predefined values that ensure maximum power savings.

When this field is specified as maximum performance, best system performance is achieved with some power conservation. The remaining fields within the power menu will be set to pre-defined values that ensure maximum power savings.

## Standby timeout

This field allows you to specify how much time of inactivity must elapse before the system automatically transits to standby mode. In standby mode all devices are powered off and the system enters a low power CPU state. Available options for this field are:

- ❒ Disabled
- ❒ 1 Minute
- ❒ 2 Minutes
- ❒ 4 Minutes
- ❒ 6 Minutes
- ❒ 8 Minutes (default value)
- ❒ 12 Minutes
- ❒ 16 Minutes

If APM is installed, this function will be controlled by APM and may function differently depending on the APM settings.

## Suspend mode

This field determines whether the TREK 2 will save its CPU status and Suspend to its lowest power consumption mode or Suspend to disk and power off. Available options for this field are:

- ❒ Suspend (default value)
- ❒ Save To Disk

## Auto Suspend timeout

This field determines how much system idle time must pass before the system enters Suspend mode. When set to *Off*, the system cannot enter Suspend mode which is the lowest power state for the TREK 2. The possible settings for this field are as follows:

- ❒ Disabled
- ❒ 5 Minutes
- ❒ 10 Minutes (default value)
- ❒ 15 Minutes
- ❒ 20 Minutes
- ❒ 30 Minutes
- ❒ 40 Minutes
- ❒ 60 Minutes

## CPU doze mode

This field allows you to enable or disable CPU idle mode power savings. When enabled, the CPU will slow down during periods when the system is not busy. The possible settings for this field are as follows:

- ❒ Off
- ❒ On (default value)

## Hard disk timeout

This field allows you to specify the period of inactivity required before the hard disk spins down and enters the Standby (motor off) state. The possible options for this field are:

- ❒ Disabled
- ❒ 1 Minute
- ❒ 2 Minutes
- ❒ 4 Minutes (default value)
- ❒ 6 Minutes
- ❒ 8 Minutes
- ❒ 10 Minutes
- ❒ 15 Minutes

## Battery low suspend

When set to Enabled, suspends to disk when the battery charge is in a low low state. Possible options include:

- ❒ Enabled (default)
- ❒ Disabled

## Resume on time

This option allows you to enable the system to resume at specific time. The possible options are:

- ❒ Off (default value)
- ❒ On

If you set this field to ON, you must also set the Resume Time field

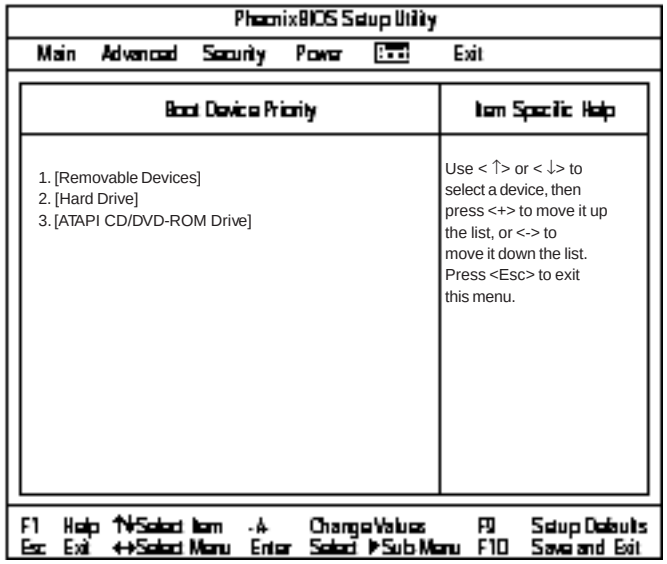
## Resume time

This option allows you to specify the time the system will resume. The Resume On Time field must be set to on for the settings in this field to function.

Enter the time in hours, minutes and seconds in a 24-hour format. For example, indicate that the system should resume normal operation at 1:00 PM by setting this field with a value of 13:00 hours.

## The boot menu

The boot menu allows the user to specify the order in which the TREK 2 is to check for a device to boot the system. You can also configure the way that the system will boot up. To make changes, select Boot from the menu bar.



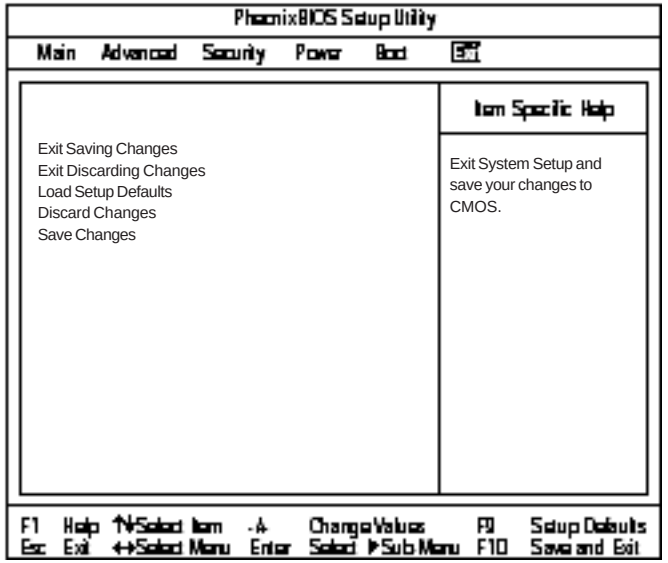

## Boot Device Priority

Use the up and down arrows to select the boot device. Then press either the plus key [+] to move the device up the list or the minus key [-] to move the device down the list.

After you have made your changes to the boot device priority menu, press [Esc] to exit to the boot menu.

## The exit menu

Once you have made all of your selections from the various menus in the Setup program, you should save your changes and exit Setup. Select Exit from the menu bar to display the following menu:



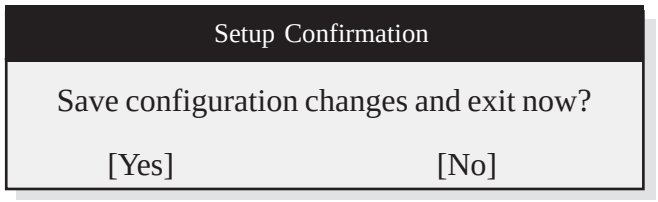

**Note:**

*Pressing the [ESC] key does not exit this menu. You must select one of the options or a menu bar item to exit.*

## Exit saving changes

Once you are finished making your selections, choose this option from the exit menu to ensure the values you selected are saved to non-volatile RAM. Changes you made to the Setup program must be changed to non-volatile RAM in order to make them operative. Non-volatile RAM dis sustained by an on-board battery even when the TREK 2 is turned off.

Once this option is selected, the Setup program displays the following message:




Select Yes to save changes and exit the BIOS setup program or press [Esc] to return to the Exit menu.

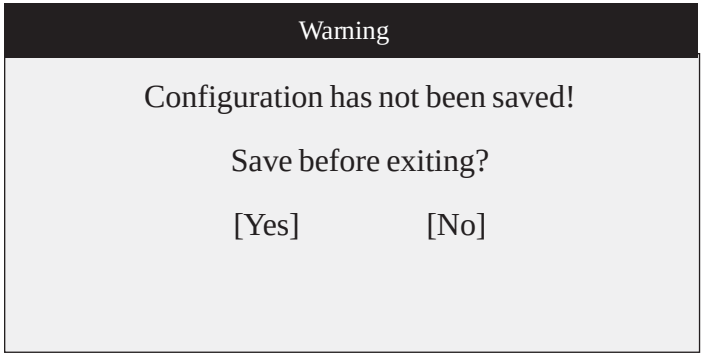
The next time you boot up the TREK 2, the BIOS will attempt to load the values you saved in non-volatile memory. If these values cause the system boot to fail, reboot and press [F2] to enter the Setup program. Once in Setup, you can try to change the values that caused the system boot to fail. If the problem persists, load the default values as described below.

**Note:**

*If you attempt to exit the Setup program without saving your changes, the program will prompt you with a message asking if you want to save your changes before exiting.*

## Exit discarding changes

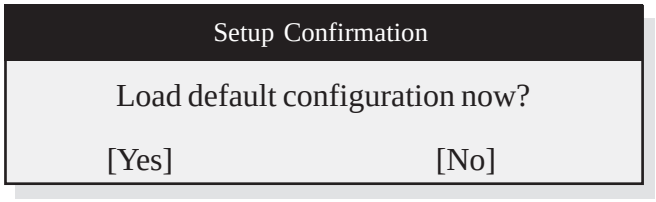
This option should only be used if you do not want to save the changes you have made to the Setup program. If you have made changes to the fields other than system date, system time and password, the system will ask for confirmation when choosing Exit Discarding Changes.




Select *Yes* to save changes and exit the BIOS setup program, select *No* to exit BIOS without saving your changes, or press [Esc] to return to the Exit menu.

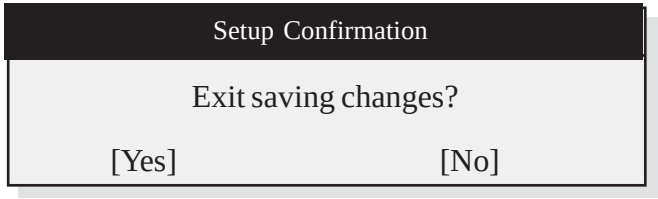
## Load setup defaults

This option allows you to load the default values for each of the parameters on the Setup menus. When this option is selected, the following message is displayed:



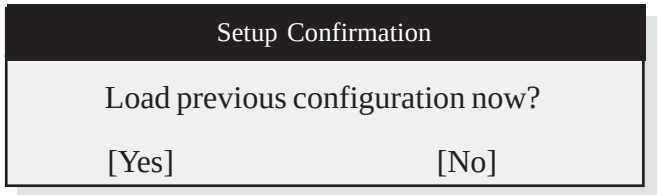

Select Yes to load default values.

You can now select Exit Saving Changes or make other changes before saving the values to non-volatile RAM.




## Discard changes

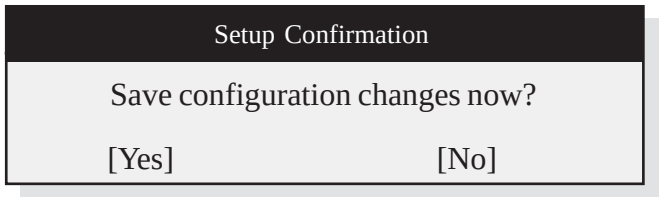
This option allows you to discard the selections you've made and restore the values you previously saved. After selecting this option, all selections are updated, and the following message is displayed:




Select Yes to discard any changes and load the previously saved values.

## Save changes

This option saves your selections without exiting the Setup program. You can then return to other menus and make changes. After selecting this option, all selections are saved, and the following message is displayed:




Select Yes to save any changes to non-volatile RAM.

To exit the BIOS Setup program, open the Exit menu and select one of the exit options.

**Note:**

*To exit BIOS Setup without saving your changes, select Exit Discarding Changes from the Exit menu and press [Enter]. When prompted by BIOS to save your changes before exiting, select [No] and press [Enter].*

# 9. Software Utilities

This chapter describes the software utilities that are provided with your computer

## Micron Customer Resource Center

The Micron Customer Resource Center, also known as the MCRC, is a CD designed by Micron to better help you in case of problems or customization of your new Micron notebook. The most current drivers published at the time of the CDs release is included on the CDs. Check the Micron Web site for newer drivers.

Instructions are included to facilitate installation. These instructions should be printed out or copied as the system often needs rebooting.

Please follow all instructions while reloading your system. If you are customizing your notebook and are reloading the operating system, please use the CD-ROM boot diskette that came with your system. Or one can be created by the MCRC for you. This boot diskette contains FDISK and a program that will guide you through installation. While using FDISK, please do not remove the non-disk partition. If deleted, some of your power management features will not function.

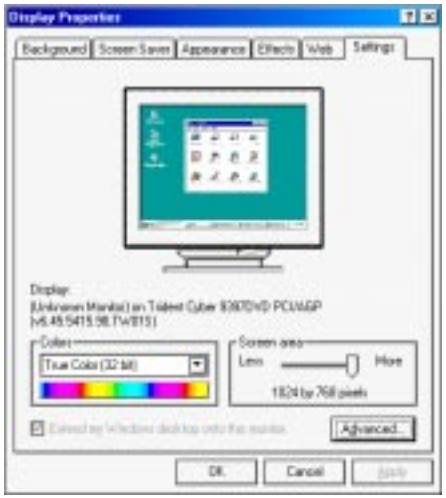
Although there are some slight differences in the interface, you will be able to intuitively follow the same procedures for Windows 98.

## Installing software drivers in Windows 98

Windows 98 automatically installs and configures your hardware drivers. If you need to reinstall the driver for some reason, please refer to the corresponding driver installation procedure on your MCRC.

## VGA utilities

Restart Windows, open Control Panel and double-click the display icon. You will notice two in the display properties window: television, display device.




## Display device

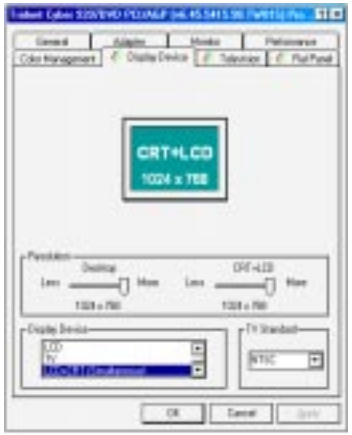
The display properties window, click the display device tab. The system will detect if an external monitor or television is connected. If so, this screen appears.

## Virtual Desktop Reality

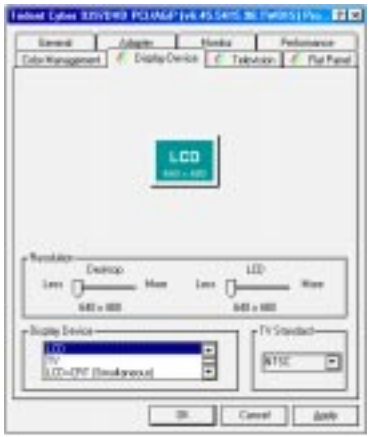
Use this to achieve a large desktop display on a small size screen. To do this:

- Adjust the screen resolution by increasing the desktop area in the "**Display Area**"
- Use your mouse cursor to point at any area of the screen to move the window screen to a larger view.

In the upper area you can choose which display device configuration you wish to use:
Select this option if you want to view the display output on the Notebook's LCD panel and an external monitor (simultaneous display).




Select this option if you wish to view the Notebook's display output on the LCD panel only.



Select this option if you want to view the Notebook's display output on a television monitor.


## Display device

Under *Display Device* you can set the display resolution for the configuration you choose.

## TV Standard

Under TV Standard you can choose between the following two TV display standards:

## NTSC

National TV Standards Committee. NTSC is the U.S. color TV standard administered by the FCC. NTSC type displays broadcast at 525 lines of resolution that are transmitted as 30 interlaced frames per second. NTSC is composed of red, green and blue signals for color and includes an FM frequency for audio and an MTS signal for stereo.

## PAL

Phase Alternating Line. PAL is a European color TV standard that broadcasts an analog signal at 625 lines of resolution 25 interlaced frames per second. The color transmission of a PAL type display is accurate, requiring no hue control on a PAL TV.

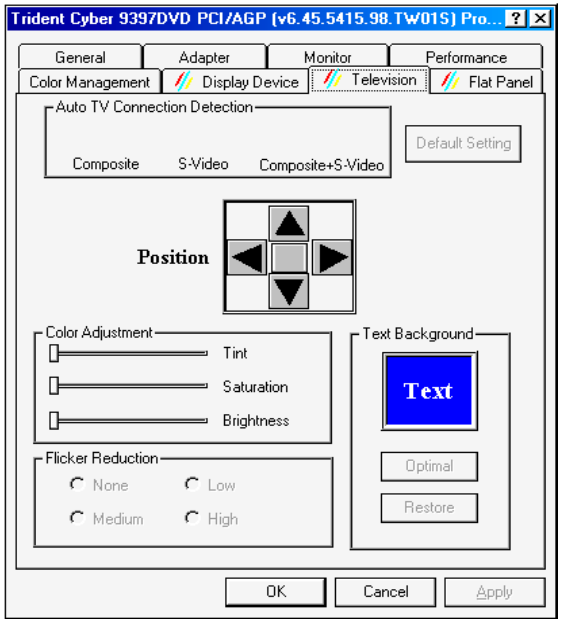
## Flat Panel

In the Display Properties window, click the Flat Panel tab.


Click the box next to Screen Expansion if you want the system to expand the display to the total area of the LCD panel.

## Television

In the Display Properties window click the Television tab. The following screen appears:




## Auto TV Connection Detection

- Composite - This option will be highlighted if the TV is connected through a composite connector.
- S-Video - This option will be highlighted if the TV is connected through an S-Video connector.
- Composite+S-Video - This option will be highlighted if the TV is connected with both a composite and S-Video connector.

## Note

*The S-Video is only supported in this driver version.*

## Color Adjustment

You can adjustment your TV display with the available color adjustment of Tint, Saturation and Brightness.

## Flicker Reduction

Use this setting adjsutment to reduce annoying screen flicker.

# 10. DVD Setup

## DVD Installation and Setup

Note:

*If you purchased your TREK 2 with DVD, all of this has already been setup and configured for you. You do not need to complete any of these instructions. Just insert a DVD movie, sit back, and enjoy.*

The following section will help you setup and utilize your new DVD hardware. Please follow these instructions carefully.

Close the LCD on your TREK 2, make sure that the power is turned off, and the battery and A/C cord have been removed before proceeding. Turn over your TREK 2 so the bottom is facing up. Install your MPEG2 video decompression card as shown in figure 10-1.

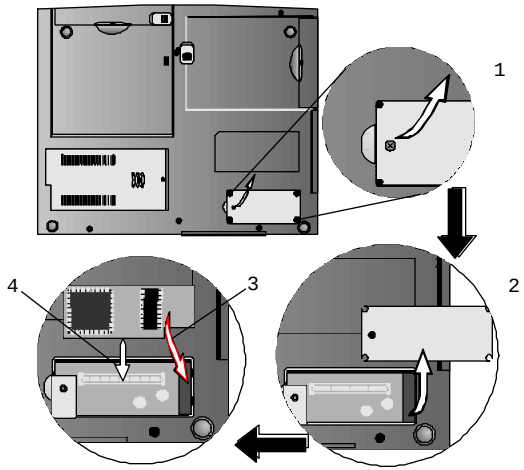



Figure 10-1: Installing optional devices

1. Remove the Phillips screw from the expansion bay.
2. Position the expansion card so the expansion card connector is facing down.
3. Insert the expansion card under the TREK 2 casing (3) and then push down the card so its connector mates with the mainboard connector.
4. Replace the expansion bay cover and secure it with the screw you removed at Step 1.

## Removing the CD-ROM

Remove the CD-ROM drive from the bottom of your TREK 2 by sliding the small tab under the front edge of the notebook to the left hand side. See figure 10-2.

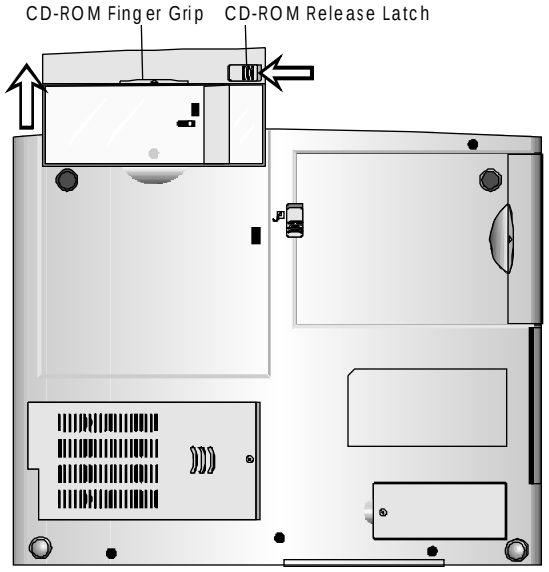



Figure 10-2: Removing the CD-ROM drive

Insert the DVD-ROM drive into your TREK 2 where the CD-ROM drive just came out of. Open the LCD assembly and power on your TREK 2.

Note

***Please select cancel for any new devices that are found during the Windows 95 or 98 boot.***

Once Windows 95 or 98 has loaded insert your Micron Electronics, Inc. MCRC CD from into the DVD-ROM drive, select the DVD ICON, and follow all the instructions carefully.

You are now ready to enjoy DVD movies in all their splendor.

**Warning:**

*Using the S-Video out function with the DVD drive to a television is not recommended and will not be supported. You may experience degraded video display quality on the television in this mode.*

# 11: Using PHDISK Utility

PHDISK.EXE is the utility program you use to prepare your hard disk for the Suspend to Disk function. It can be used to prepare a dedicated partition prior to storing system configuration data, and system and video memory. Do not remove this partition, labeled "non-DOS" from your hard drive using FDISK. This would disable the TREK 2's ability from saving to disk.

## Command line options

The following table lists the PHDISK command line options and additional parameters. The PHDISK options can be called by using only the first letter of each option and parameter. For instance, either PHDISK /REFORMAT or PHDISK /R will invoke the reformat option.

| Option | Parameters | |
|---|---|---|
| None | | Displays the PHDISK opening screen |
| /CREATE | /PARTITION | Formats the Save to Disk partition |
| /DELETE | /PARTITION | Deletes the Save to Disk partition |
| /INFO | | Displays data about the Save to Disk partition or file |
| /REFORMAT | /PARTITION | Reformats the Save to Disk partition after an error is detected.rameters Description |

Below is an example of the kind of information that is displayed when PHDISK is called without a command line option. This example displays Save to Disk PARTITION INFORMATION headers. This header is displayed only when a Save to Disk partition exists.

The USAGE and OPTIONS headers are displayed in several screens displayed by PHDISK.

## Help screen

The HELP screen is displayed when PHDISK is called without any command-line options.

```
Usage: PHDISK [options]
/CREATE   (/FILE or /PARTITION)    - Create STD file or partition
/DELETE   (/FILE or /PARTITION)    - Delete existing STD file or partition
/INFO                              - Information on STD disk area(s)
/REFORMAT  /PARTITION              - Reformat existing STD partition

This utility configures a hard disk to utilize the Phoenix NoteBIOS 4.0 save to Disk feature.
Please refer to your user manual for information regarding Save to Disk.
```

## CREATE option

The CREATE option measures the amount of on-board memory, and partitions a segment of the hard disk drive large enough to store all data present in the segment. The CREATE option formats the Save to Disk partition or file, marking bad spots on the hard disk drive as they are found.

### Automatic memory size calculation

PHDISK automatically measures all system and video memory and calculates the exact amount of hard disk space required to store the maximum amount of data present in memory.

Micron has already placed a partition on your hard drive that will handle all the way up to a fully populated 256MB system.

### User-specified memory size

The user may specify a certain amount of memory to be allocated for the Save to Disk function. However, the amount of space required to store all system and video memory is calculated automatically, whenever the CREATE option is used, even if the user specifies some desired amount.
If the amount specified by the user is equal to or greater than the calculated amount, then the user-specified amount is allocated.

If the user-specified amount is less than the calculated amount, then no space is allocated, and an error message is displayed.
If you wish to allocate a specific amount of disk space for this function, enter the amount in kilobytes, as a simple decimal number, *without* any notation such as *K* or *KB*.

The table below shows the various ways to use the /CREATE option:

### /PARTITION or /P

PARTITION creates a hard disk partition where only Save to Disk data can be stored.

### /CREATE option syntax

The syntax of the PHDISK /CREATE option is:

**PHDISK /CREATE [/PARTITION]**

## REFORMAT Option

The /REFORMAT option resets the pointers in a Save to Disk partition. This option should be used after a Save to Disk operation is terminated by a read or write error.

### REFORMAT Option Syntax

| Command | Description |
|---|---|
| PHDISK/REFORMAT PARTITION PH/DISK/R/P | Reformats the Save to Disk partition |

## INFO option

The /INFO option displays data about the Save to Disk partition or file.

### INFO option syntax

Below is an example of the output of the /INFO option when a Save to Disk partition exists on the system:

| Command | Description |
|---|---|
| PHDISK /INFO /PARTITION PHDISK /I /P | Displays the size (in kilobytes) and location of the Save to Disk partition |

# PHDISK Sign-on message

```
PHDISK 3.2 - Phoenix NoteBIOS 4.0 (TM) Save to Disk Preparation Utility
Copyright (c) Pheonix Technologies Ltd. 1995 All rights reserved.

Save to Disk file information:
    Partition starts at sector xxxxxx (head xx, cylinder xx, sector xx)
    Partition size: xxxx KBytes total

Current System Status:
     You currently need a Save to Disk area of XXXX KBytes.  PHDisk will also require
additional overhead and will automatically calculate the actual require space.

You have both a file and a partition. Save to Disk will default to file. Either delete the file, or the
partition.

Usage: PHDisk [options]
/CREATE    (/FILE or /PARTITION) - - Create STD file or partition
/DELETE    (/FILE or /PARTITION) - - Delete existing STD file or partition
/INFO                                - - Information on STD disk area(s)
/REFORMAT /PARTITION             - - Reformat existing STD partition

This utility configures a hard disk to utilize the Phoenix NoteBIOS 4.0 Save to Disk feature.
Please refer to your user manual for information regarding Save to Disk.
```

# Unrecognized option

The following text is displayed when an invalid option or parameter is entered on the command line:

```
Error: (User option) is an unrecognized command line option. For a command line summary,
invoke PHDISK without any parameters.
```

# Fatal error

The following text is displayed when a hard disk error is detected during any Save to Disk operation. (Don't panic! The word *fatal* simply means that the program was terminated, not that your hard disk is damaged.)

```
Error: A fatal hard disk error has occured. Check your hardware configuration and re-execute.
```

Run a hard disk utility program to determine the source of the error, then run PHDISK again.

The following text is displayed when the amount of unused disk space available is less than the amount required to create the Save to Disk partition:

```
Error: Not enough free disk space exists to create the suspend to disk partition. Refer to the
user manual for possible suggestions on increasing the amount of free disk space for the suspend
to disk partition.
```

The following text is displayed when the amount of unused disk space available is less than the amount required to create the Save to Disk partition:

```
Error: Not enough free disk space exists to create the suspend to disk partition. Refer to the
user manual for possible suggestions on increasing the amount of free disk space for the suspend
to disk partition.
```

Delete unused files, backup the DOS partition, reformat the disk, then run PHDISK /PARTITION /CREATE to create a larger partition.

## Save to Disk partition exists

The following text is displayed when a PHDISK /CREATE / PARTITION operation is attempted while a Save to Disk partition exists.

```
Error: Phoenix NoteBIOS Save to Disk partition already exists. to resize the partition,
delete the existing partition with PHDISK/DELETE and create the partition with
PHDISK/CREATE.
```

Re-allocate the Save to Disk partition, if needed; or do nothing.

## First two sectors bad

The following text is displayed when the Save to Disk partition cannot be used:

```
Error: The first two sectors in the Save to Disk partition are both unusable. This disk is
unsuitable for the Phoenix NoteBIOS Save to Disk feature.
```

Execute PHDISK /PARTITION /DELETE, and PHDISK / PARTITION /REFORMAT.

## PHDISK /CREATE failed to execute

The following text is displayed when no Save to Disk partition exists, or the partition table on head 0, cylinder 0, sector 1 is corrupted.

```
Error: The Phoenix NoteBIOS (TM) Save to Disk partition doesn't exist or the hard disk
partition table on head 0, cylinder 0, sector 1, is corrupted. Invoke PHDISK/CREATE to create
the Save to Disk partition.
```

Execute PHDISK/PARTITION/REFORMAT to reset the GSM flags.

# Appendix A: Specifications

## General

### CPU

- Pentium II 233, 266, 300, 333, 366 MHz W/MMX/ MMC2, APG2.X (400-pin design)

### Memory

- 0 MB DRAM on board
- 2 144-pin SODIMM Slots
- 3.3VTSOP DRAM
- Supports Synchronous DRAM

### Core logic chips

- Intel 440 BX (optimized for Pentium II CPUs)

### L2 cache memory

- Supports 512KB synchronous pipeline burst SRAM
- Supports 256KB synchronous pipeline burst SRAM On-die Full speed L2 cache (333 and 366 MHz only)

### PCMCIA Sockets

- Two PCMCIA type II or one PCMCIA type III connectors
- Supports ZoomedVideo
- Supports CardBus

### Pointing devices

- Touch pad

### Keyboard

- Keyboard controller: Mitsubishi M38867
- 19mm pitch on QWERTY keys

### Audio

- ESS Maestro-2
- Sound Blaster Pro Compatible
- PCI sound/AC 97 ready
- External audio inputs and amplified output
- Dual built-in speakers (1 watt)
- 3D audio support

### I/O Ports

- 15-pin female D-connector video port
- 9-pin male D-connector 16550 UART RS-232 serial port
- 25-pin female D-connector EPP/ECP aware parallel port
- 6-pin mini-DIN external keyboard and PS/2 mouse connector
- TV out port (S-connector)
- Two PCMCIA type II or one PCMCIA type III slots.
- 204-pin port replicator connector
- Two Universal Serial Bus (USB) port
- One line in jack
- One line out jack
- One headphones jack
- One microphone jack

## Video System

### Display

- 12.1"TFT SVGA color LCD
- 14.1"TFT XGA color LCD
- Video Controller: Trident 9397 DVD AGP 2.X
- Data Path: 32-bit PCI local bus
- Video DRAM: 4MB SGRAM
- XGA LCD resolution: 1024 x 768
- SVGA LCD resolution: 800x600

## Electrical

### AC Adapter

- Universal input - auto-sensing
- 2 wire AC and 2 wire DC

## DC-DC Converter

- Supplies 5V, 3.3V CORE VCC and IO VCC, +12V, MP5V
- Contains smart battery charger
- Charge modes
- Fast: 4 hours charge time with system off or in suspend mode (Li-Ion battery pack)
- Trickle: System on or off (to maintain full capacity — for Li-ion battery pack only)
- Pre-Charge: When battery pack's voltage drops below 7.5V (for Li-Ion battery pack only)

## Mechanical Dimensions

- Weight: 3.27KG (7.2lbs) (with CD-ROM and battery)
- Size: 310mm (W) x 250mm(D) x 45mm (H)

## Operating Environment

### Temperature

- Operating: 5°C ~ 35°C
- Storage: -20°C ~ 60°C

### Humidity

- Operating: 30% ~ 90% (non-condensing)
- Non-operating: 10% ~ 90% (non-condensing)

### Altitude

- Operating: 200 to 10,000 feet above sea level
- Non-operating: 30,000 feet above sea level.

## Options

- Spare battery pack: Li-ion
- Memory expansion cards: 32MB, 64MB and 128MB /SDRAM
- Mini-docking station with two type II PCMCIA slots
- V.90 fax/modem
- DVD playback PCI expansion card (No NTSC output playback)
- LS-120 drive module; DVD- ROM Drive
- Second HDD

## Software Specifications

## System Software

- System BIOS: Phoenix Core Version 6.X
- Video BIOS: Trident 9397 DVD AGP 2X
- Supported Operating Systems
  - Windows 95
  - Windows 98
  - Windows NT 4.0
- Standard Software Drivers (all on your MCRC CD)
  - Pointing device driver
  - VGA/SVGA drivers
  - PCMCIA driver
  - ESS sound drivers
  - PCI-IDE driver
  - IR driver

## Optional fax/modem Environment

Temperature

- Operating: 5(C~35(C
- Non-operating: -20(C~60(C

Humidity

- Operating: 30%~90% (non-condensing)
- Non-operating: 5%~95% (non-condensing)

Altitude
- Operating: -200~10000ft
- Non-operating: -200~30000ft

Shock
- Operating: 10G, 11ms
- Non-operating: 50G, 11ms

Vibration
- Operating: 10~27Hz, 0.01"
- Non-operating: 5~62Hz, 0.02"

Drop
- 900mm with packing

Acoustic Noise
- 35dB(max.) at 1 meter

ESD
- Follow IEC 801-2 standard level 3
- 0~8KV: no erro allowed

P.L.T.
- 1KV: no any error

## Regulation

Safety:
- UL 1950, CSA, TÜV

EMI
- FCC class B, Part 15
- CE mark

## MTTR

- 30 min.

## Physical Dimension

- Dimension: 210mmx326mmx87.52mm (with base)
  137.10mmx326mmx87.52mm
- Weight: 2.5 kg.

## Specification

- PC host based controllerless PCI module
- Support Win95
- Data/Fax
- Interface:
  1) DATA:PC/AT parallel bus PNP compatible.

  2) LINE:Modular line connector, one RJ11C phone-jacks.

FAXFUNCTION-

1 OPERATION SPEC
-TRANSMISSION WAY: Halfduplex.
-G3 FAX MODES: V.17(14400bps)
V.29(9600/7200bps)
V.27 ter(4800/2400bps)
V.21 Channel 2(300bps)used only for signaling.

2 TRANSMIT/RECEIVE SPEC
-CARRIERFREQUENCY:
V.17
V.29
V.27 ter3
EIA578 CLASS1 COMMANDSET
-MODEM FUNCTION-

1 OPERATION SPEC
-TRANSMISSION WAY: Full duplex.
-DATASPEED: 56K(download)/
33.6K(Upload)/33600/
28800/26400/24000/
21600/19200/16800/
14400/9600/4800/2400/
1200/300bps and 1200/
75bps,.

2 ERROR CORRECTION: V.42ANDMNP2,3,4.
3 DATA COMPRESSION: V.42bisANDMNP5.
4 ENHANCED"AT" COMMANDSET.
5 ASYNCHRONOUS COMMUNICATION

SPECIFICATION BAUD RATE:
(1)DTETOMODEMDATARATE: UP TO 300, 1200, 2400, 4800, 9600, 14400, 19200, 28800, 38400, 57600, 115200, 230400BPS
(2)LINEDATARATE: NORMAL MODE: 300/1200/2400/4800/9600/14400/16800/19200/21600/24000/26400/28800/31200/33600 bps and 1200/75 bps, 56K download Upload.

6 EMI & SAFETY DESIGN STANDARD: Compliance with FCC PART 15 and PART 68.
7 TEMPERATURE & HUMIDITY -TEMPERATURE RANGE:
Transit: -40 Degree C to 70 Degree C. (Withstand 72 hrs of transit period)
Storage: -40 Degree C to 65 Degree C. (Withstand 6 months of storage)
Operating:0 Degree C to 40 Degree C.
-HUMIDITY:20-80%. (Non-Condensing Relative Humidity)
8 DIALING CAPABILITY-Touch-Tone.
9 MODEM FEATURES:
1)Command buffer support 40 characters.
2)Auto dial and auto answer.
3)Connector to sound board for speaker
4)Wake up on ring.(option Function)
10 TESTANDDIAGNOSTICSFACILITIES
-Remote digital loop and remote digital loop self test.
-Analog loop and analog loop self test.
-Digital loop test.

## Optional port replicator

### Environment

Temperature
* Operating: 5(C~35(C
* Non-operating: -20(C~60(C
Humidity
* Operating: 30%~90% (non-condensing)
* Non-operating: 5%~95% (non-condensing)
Altitude
* Operating: -200~10000ft
* Non-operating: -200~30000ft
Shock
* Operating: 10G, 11ms
* Non-operating: 50G, 11ms
Vibration
* Operating: 10~27Hz, 0.01"
* Non-operating: 5~62Hz, 0.02"
Drop
* 900mm with packing
Acoustic Noise
* 35dB(max.) at 1 meter
ESD
* Follow IEC 801-2 standard level 3
* 0~8KV: no erro allowed
P.L.T.
* 1KV: no any error
A.2 Regulation
Safety:
* UL 1950, CSA, TÜV

**EMI**
* FCC class B, Part 15
* CE mark

## MTTR
* 30 min.

## Physical Dimension
* Dimension: 210mmx326mmx87.52mm (with base)
137.10mmx326mmx87.52mm
* Weight: 2.5 kg.

# Appendix B:

## Index

# Appendix C:
## Abbreviations

**ACPI**
Advanced Configuration and Power Interface
**AMD**
Advanced Micro Devices
**APM**
Advanced Power Management
**ASKIR**
Amplitude shift keyed infrared port
**ATA**
AT Attachment (Advanced Technology Attachment)
**ATAPI**
AT Attachment Packet Interface
**BIOS**
Basic Input / Output System
**CMOS**
Complementary Metal Oxide Semiconductor
**CPU**
Central Processing Unit
**DIMM**
Dual In-line Memory Module
**DMA**
Direct Memory Access
**DRAM**
Dynamic Random Access Memory
**D-STN**
Dual Scan STN (Super Twisted Nematic)
**D-STN XGA**
Dual Scan STN (Super Twisted Nematic) Extended Graphics Array
**ECP**
Enhanced Capabilities Port
**EDO DRAM**
Extended Data Output DRAM
**EIDE**
Enhanced IDE (Integrated Drive Electronics)
**EPP**
Enhanced Parallel Port
**FDC** Floppy disk controller
**FIR**
Fast Infrared
**GB**
Gigabyte (1GB = 1,073,741,824 bytes or 1,024MB)
**HP SIR** Hewlett-Packard Serial InfraRed
**I/O**
Input / Output
**IDE**
Integrated Drive Electronics (internal hard disk drive interface)
**IEEE**
Institute of Electrical and Electronics Engineers
**IrDA**
Infrared Data Association
**IRQ**

**LAN**
Local Area Network
**LCD**
Liquid Crystal Display
**LCM**
Liquid Crystal Module
**LED**
Light Emitting Diode
**Li-Ion**
Lithium Ion (battery)

**MB**
Megabyte (1MB = 1,048,576 bytes or 1,024KB)
**MESI**
Modified Exclusive Shared and Invalid (protocol)
**MHz** MegaHertz
**MIDI**
Musical Instrument Digital Interface
**MMU**
Memory Management Unit
**MMX**
MultiMedia EXtensions
**MPEG**
Motion Picture Experts Group
**MS-DOS**
Microsoft Disk Operating System
**Ni-MH**
Nickel Metal Hydride
**NTSC**
(National TV Standards Committee) The US color TV standard administered by the FCC. It currently broadcasts at 525 lines of resolution that are transmitted as 30 interlaced frames per second (60 half frames per second, or 60 “fields” per second in TV jargon).
**PAL**
(Phase Alternating Line) A European color TV standard that broadcasts an analog signal at 625 lines of resolution 25 interlaced frames per second (50 half frames per second).
**PCI**
Peripheral Component Interconnect
**PCMCIA**
Personal Computer Memory Card International Association
**PGA**
Pin Grid Array
**PIO**
Programmed Input/Output
**POST**
Power On Self-Test
**RAM**
Random Access Memory
**ROM**
Read Only Memory
**RTC**
Real Time Clock
**SIR**
Serial Infrared
**SMI**
System Management Interrupt
**SPP**
Standard Parallel Port
**SRAM**
Static Random Access Memory
**SVGA**
Super Video Graphics Array
**S-Video**
S-video hookups use a special 5-pin connector rather than the common RCA phono plug.
**TFT**
Thin Film Transistor
**TFT XGA**
Thin Film Transistor Extended Graphics Array
**USB**
Universal Serial Bus
**VGA**
Video Graphics Array
**XGA**
Extended Graphics Array
**ZV Port**
Zoomed Video Port

MAS001571-02

1/99